HUMAN ASSAYED MULTI-SERA - LEVEL 2 (HUM ASY CONTROL 2)

CAT. NO. HN1530 **GTIN:** 05055273203783 **SIZE:** 20 x 5ml
CAT. NO. HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
LOT NO. 1705UN **EXPIRY:** 2028-01-28

INTENDED USE
This product is intended for *in vitro* diagnostic use, in the quality control of diagnostic assays. The Human Assayed Multi-sera is for the control of accuracy.

DEVICE DESCRIPTION
The Human Assayed Multi-sera is supplied at 2 levels, level 2 and 3. Target values and ranges are supplied for the analytes listed in the values section at both levels.

SAFETY PRECAUTIONS AND WARNINGS
For *in vitro* diagnostic use only. Do not pipette by mouth. Exercise the normal precautions required for handling laboratory reagents.

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.
However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY
OPENED: Store refrigerated (+2°C to +8°C). Reconstituted serum is stable for 8 hours at +15°C to +25°C or 7 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C. (See Limitations)

UNOPENED: Store refrigerated (+2°C to +8°C). Stable to expiration date printed on individual vials.

LIMITATIONS
For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25µl - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C.
Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
GLDH is stable for 2 days at +2°C to +8°C.
NEFA is stable for 1 day at +2°C to +8°C.
Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at –18°C to –24°C.
Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.
Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.
The control should not be used as a calibration material.
Due to the zinc content in some batches of rubber stoppers, the QC and calibrator material should be aliquoted into polypropylene tubes and stored at +2°C to +8°C to ensure stable zinc levels throughout the stability period.

PREPARATION FOR USE
The Human Assayed Multi-sera is supplied lyophilised.

1. Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.

2. Refer to the Control section of the individual analyser application.

3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

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MATERIALS PROVIDED
Human Assayed Multi-sera - Level 2 20 x 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

ASSIGNED VALUES
Due to the variation caused by test equipment, test reagents and laboratory technique, the quoted ranges are provided for guidance. It is recommended that these ranges are used until each laboratory has established its own ranges, based on individual laboratory requirements.

Each batch of Assayed Human Serum Control is assigned at Randox Laboratories and a number of external laboratories. Values are assigned from a consensus of results obtained by these laboratories.

With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean ±2S.D.

If an instrument specific value is not available, refer to the Method section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email Technical.Services@randox.com.

NOTES
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(1) Applies only in Germany. Ranges established according to the Guidelines of the Federal Chamber of Physicians in Germany.
(2) Values established by reference laboratories officially recognised by the Federal Chamber of Physicians in Germany.
(3) DGKC: German Society for Clinical Chemistry.
(4) IFCC: International Federation of Clinical Chemistry.
(5) SCE: Scandinavian Committee on Enzymes.

EC REP Randox Teoranta, Meenmore,
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Abaxis Piccolo

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.28	3.64	4.92	0.320	0.640	Bromocresol Purple
	g/l	42.8	36.4	49.2	3.20	6.40	
Bilirubin Total	mg/dl	1.75	1.38	2.12	0.185	0.370	Oxidation to Biliverdin/Vanadate
	µmol/l	29.9	23.6	36.2	3.15	6.30	
Calcium	mg/dl	8.90	8.01	9.79	0.445	0.890	Arsenazo III
	mmol/l	2.22	2.00	2.44	0.110	0.220	
Glucose	mg/dl	110	93.5	127	8.50	17.0	Hexokinase
	mmol/l	6.13	5.21	7.05	0.460	0.920	
Potassium	mmol/l	3.90	3.59	4.21	0.155	0.310	Enzymatic
Sodium	mmol/l	141	134	148	3.50	7.00	Enzymatic
Urea	mg/dl	44.8	38.1	51.5	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	20.9	17.8	24.0	1.55	3.10	
	mmol/l	7.46	6.34	8.58	0.560	1.12	

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Abbott Alinity c — Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml — Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.95	3.36	4.54	0.295	0.590	Abbott Alinity Albumin BCG 2
	g/l	39.5	33.6	45.4	2.95	5.90	
	g/dl	3.86	3.28	4.44	0.290	0.580	Abbott Alinity Albumin BCP 2
	g/l	38.6	32.8	44.4	2.90	5.80	
	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Green
	g/l	39.7	33.7	45.7	3.00	6.00	
	g/dl	3.98	3.38	4.58	0.300	0.600	Bromocresol Purple
	g/l	39.8	33.8	45.8	3.00	6.00	
Alkaline Phosphatase	U/l	195	166	224	14.5	29.0	Abbott Alinity Alkaline Phosphatase 2
	U/l	188	160	216	14.0	28.0	AMP non-optimised
	U/l	194	165	223	14.5	29.0	AMP optimised to IFCC
	U/l	190	162	218	14.0	28.0	Colorimetric
	U/l	195	166	224	14.5	29.0	Other AMP kits
ALT (GPT)	U/l	37	30	44	3.50	7.00	Abbott Alinity ALT 2
	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	55	47	63	4.00	8.00	Immunoinhibition, EPS substrate
Amylase Total	U/l	81	69	93	6.00	12.0	Abbott Alinity Amylase 2
	U/l	81	69	93	6.00	12.0	Abbott Architect/Alinity cal factor 3431
	U/l	82	70	94	6.00	12.0	Abbott Architect/Alinity cal factor 3806
	U/l	80	68	92	6.00	12.0	Abbott blocked pNPG7
AST (GOT)	U/l	40	32	48	4.00	8.00	Abbott Alinity AST 2
	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	11.3	8.96	13.6	1.15	2.30	PEP Carboxylase
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.14	0.901	1.38	0.120	0.240	Diazo with Dichloroanaline
	µmol/l	19.5	15.4	23.6	2.05	4.10	
	mg/dl	1.11	0.877	1.34	0.115	0.230	Diazo With Sulphanilic Acid
	µmol/l	19.0	15.0	23.0	2.00	4.00	
	mg/dl	1.13	0.893	1.37	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.4	15.3	23.5	2.05	4.10	
Bilirubin Total	mg/dl	1.63	1.29	1.97	0.170	0.340	Abbott Alin/Arch cal batch no >97447/8/9
	µmol/l	27.8	22.0	33.6	2.90	5.80	
	mg/dl	1.65	1.30	2.00	0.175	0.350	Abbott Alinity Total Bilirubin 2
	µmol/l	28.2	22.3	34.1	2.95	5.90	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Diazo With Dichloroaniline
	µmol/l	29.0	22.9	35.1	3.05	6.10	
	mg/dl	1.64	1.30	1.98	0.170	0.340	Diazo With Sulphanilic Acid
	µmol/l	28.0	22.1	33.9	2.95	5.90	

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All enzyme values are quoted to a temperature of 37°C, unless otherwise stated

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Abbott Alinity c

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Bilirubin Total	mg/dl	1.64	1.30	1.98	0.170	0.340	Diazonium Ion
	µmol/l	28.0	22.1	33.9	2.95	5.90	
	mg/dl	1.64	1.30	1.98	0.170	0.340	Dichlorophenyl Diazonium
	µmol/l	28.1	22.2	34.0	2.95	5.90	
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
	mg/dl	8.62	7.76	9.48	0.430	0.860	Cresolphthalein Complexone
	mmol/l	2.15	1.94	2.36	0.105	0.210	
Chloride	mmol/l	102	93.8	110	4.00	8.00	ISE Indirect
Cholesterol	mg/dl	153	133	173	10.0	20.0	Abbott Alinity Cholesterol 2
	mmol/l	3.97	3.45	4.49	0.260	0.520	
	mg/dl	155	135	175	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	4.01	3.49	4.53	0.260	0.520	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.97	3.45	4.49	0.260	0.520	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.99	3.47	4.51	0.260	0.520	
Cholinesterase	U/l	7010	5608	8412	701	1402	Colorimetric - Butyrylthiocholine
CK Total	U/l	210	172	248	19.0	38.0	Abbott CK-NAC (IFCC)
	U/l	216	177	255	19.5	39.0	CK-NAC (IFCC)
	U/l	219	180	258	19.5	39.0	CK-NAC serum start (DGKC)
	U/l	212	174	250	19.0	38.0	CK-NAC substrate start (DGKC)
Creatinine	mg/dl	1.41	1.13	1.69	0.140	0.280	Abbott Alinity Creatinine 2
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline Picrate With Deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.38	1.10	1.66	0.140	0.280	IDMS Traceable
	µmol/l	122	97.6	146	12.0	24.0	
D-3-Hydroxybutyrate	mmol/l	0.306	0.260	0.352	0.023	0.046	Tris buffer 100mmol pH 8.5
Free T4	ng/dl	1.30	0.975	1.63	0.165	0.330	Abbott Architect
	pg/ml	13.0	9.75	16.3	1.65	3.30	
	pmol/l	16.7	12.5	20.9	2.10	4.20	
gamma-GT	U/l	61	52	70	4.50	9.00	Abbott Alinity GGT 2
	U/l	60	51	69	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	61	52	70	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	107	91.0	123	8.00	16.0	Glucose Dehydrogenase
	mmol/l	5.92	5.03	6.81	0.445	0.890	

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Abbott Alinity c

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Glucose	mg/dl	104	88.4	120	8.00	16.0	Glucose Oxidase
	mmol/l	5.78	4.91	6.65	0.435	0.870	
	mg/dl	107	91.0	123	8.00	16.0	Hexokinase
	mmol/l	5.92	5.03	6.81	0.445	0.890	
HDL - Cholesterol	mg/dl	52.1	44.3	59.9	3.90	7.80	Direct HDL, Clearance method
	mmol/l	1.35	1.15	1.55	0.100	0.200	
	mg/dl	51.4	43.7	59.1	3.85	7.70	Direct HDL, Immunoseparation
	mmol/l	1.33	1.13	1.53	0.100	0.200	
	mg/dl	50.6	43.0	58.2	3.80	7.60	Direct HDL, PPD
	mmol/l	1.31	1.11	1.51	0.100	0.200	
	mg/dl	51.0	43.4	58.6	3.80	7.60	HDL Ultra/Accel Selective Detergent
	mmol/l	1.32	1.12	1.52	0.100	0.200	
Iron	µg/dl	113	92.7	133	10.0	20.0	Abbott Alinity Iron 2
	µmol/l	20.3	16.6	24.0	1.85	3.70	
	µg/dl	113	92.7	133	10.0	20.0	Colorimetric with ppt.
	µmol/l	20.3	16.6	24.0	1.85	3.70	
	µg/dl	112	91.8	132	10.0	20.0	Colorimetric without ppt.
	µmol/l	20.0	16.4	23.6	1.80	3.60	
Lactate	mg/dl	12.8	10.5	15.1	1.15	2.30	Colorimetric - Lactate oxidase
	mmol/l	1.42	1.16	1.68	0.130	0.260	
LD (LDH)	U/l	191	162	220	14.5	29.0	Abbott Alinity LD 2
	U/l	191	162	220	14.5	29.0	L to P, IFCC
	U/l	196	167	225	14.5	29.0	Lactate to Pyruvate methods
Lithium	mg/dl	0.663	0.583	0.743	0.040	0.080	Spectrophotometric
	mmol/l	0.955	0.840	1.07	0.058	0.115	
Magnesium	mg/dl	2.26	1.99	2.53	0.135	0.270	Arsenazo III
	mmol/l	0.931	0.819	1.04	0.055	0.109	
	mg/dl	2.28	2.01	2.55	0.135	0.270	Chlorphosphonazo III
	mmol/l	0.938	0.825	1.05	0.056	0.112	
	mg/dl	2.32	2.04	2.60	0.140	0.280	Enzymatic
	mmol/l	0.955	0.840	1.07	0.058	0.115	
	mg/dl	2.34	2.06	2.62	0.140	0.280	Xylidyl Blue
	mmol/l	0.963	0.847	1.08	0.059	0.117	
Osmolality	mOsm/Kg	299	239	359	30.0	60.0	Calculated
Phosphate Inorganic	mg/dl	4.93	4.19	5.67	0.370	0.740	Phosphomolybdate Enzymatic
	mmol/l	1.59	1.35	1.83	0.120	0.240	
	mg/dl	4.93	4.19	5.67	0.370	0.740	Phosphomolybdate UV
	mmol/l	1.59	1.35	1.83	0.120	0.240	

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Abbott Alinity c

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Potassium	mmol/l	3.83	3.52	4.14	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.77	4.62	6.92	0.575	1.15	Abbott Alinity Total Protein 2
	g/l	57.7	46.2	69.2	5.75	11.5	
	g/dl	5.78	4.62	6.94	0.580	1.16	Biuret reaction, end point
	g/l	57.8	46.2	69.4	5.80	11.6	
	g/dl	5.79	4.63	6.95	0.580	1.16	Biuret reaction, kinetic
	g/l	57.9	46.3	69.5	5.80	11.6	
PSA Total	ng/ml = µg/l	8.16	6.12	10.2	1.02	2.04	Abbott Architect/ Alinity
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.10	0.880	1.32	0.110	0.220	Abbott Architect
TIBC	µg/dl	231	182	280	24.5	49.0	Calculated from Transferrin
	µmol/l	41.4	32.7	50.1	4.35	8.70	
	µg/dl	225	178	272	23.5	47.0	FE+UIBC(saturation with iron)
	µmol/l	40.3	31.8	48.8	4.25	8.50	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Abbott Alinity i
	mmol/l	1.09	0.916	1.26	0.085	0.170	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GK UV. no correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
	mg/dl	95.6	80.3	111	7.70	15.4	Lipase/Glycerol Dehydrogenase
	mmol/l	1.08	0.907	1.25	0.085	0.170	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	44.4	37.7	51.1	3.35	6.70	Abbott Architect Urea Nitrogen 2
	mg/dl (BUN)	20.7	17.6	23.8	1.55	3.10	
	mmol/l	7.38	6.27	8.49	0.555	1.11	
	mg/dl	44.9	38.2	51.6	3.35	6.70	Urease, end point
	mg/dl (BUN)	20.9	17.8	24.0	1.55	3.10	
	mmol/l	7.47	6.35	8.59	0.560	1.12	
	mg/dl	45.4	38.6	52.2	3.40	6.80	Urease, kinetic
	mg/dl (BUN)	21.2	18.0	24.4	1.60	3.20	
	mmol/l	7.56	6.43	8.69	0.565	1.13	
Uric Acid (Urate)	mg/dl	5.82	5.06	6.58	0.380	0.760	Abbott Alinity Uric Acid 2
	mmol/l	0.346	0.301	0.391	0.023	0.045	

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Abbott Alinity c

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mg/dl	5.88	5.12	6.64	0.380	0.760	Uricase perox. no ascorb. ox.
	mmol/l	0.350	0.305	0.395	0.023	0.045	
	mg/dl	5.88	5.12	6.64	0.380	0.760	Uricase Perox. with ascorb. ox
	mmol/l	0.350	0.305	0.395	0.023	0.045	
Zinc	µg/dl	157	126	188	15.5	31.0	Colorimetric with deprot.
	µmol/l	24.1	19.3	28.9	2.40	4.80	

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Abbott Alinity i

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.29	0.968	1.61	0.160	0.320	Abbott Architect
	pg/ml	12.9	9.68	16.1	1.60	3.20	
	pmol/l	16.6	12.5	20.7	2.05	4.10	
PSA Total	ng/ml = µg/l	7.85	5.89	9.81	0.980	1.96	Abbott Architect/ Alinity
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.14	0.912	1.37	0.115	0.230	Abbott Architect
Total T3	ng/dl	118	88.5	148	15.0	30.0	Abbott Architect
	ng/ml	1.18	0.885	1.48	0.150	0.300	
	nmol/l	1.82	1.37	2.27	0.225	0.450	
Total T4	ng/ml	70.0	52.5	87.5	8.75	17.5	Abbott Architect
	nmol/l	89.8	67.4	112	11.1	22.2	
	µg/dl	7.00	5.25	8.75	0.875	1.75	

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Abbott Arch C - Non Reagent

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.08	3.47	4.69	0.305	0.610	Bromocresol Green
	g/l	40.8	34.7	46.9	3.05	6.10	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Cholinesterase	U/l	6051	4841	7261	605	1210	Colorimetric - Butyrylthiocholine
Glucose	mg/dl	113	96.1	130	8.50	17.0	Hexokinase
	mmol/l	6.28	5.34	7.22	0.470	0.940	
Phosphate Inorganic	mg/dl	5.27	4.48	6.06	0.395	0.790	Phosphomolybdate UV
	mmol/l	1.70	1.45	1.95	0.125	0.250	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	45.7	38.8	52.6	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
	mmol/l	7.60	6.46	8.74	0.570	1.14	

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Abbott Architect c Systems

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.98	3.38	4.58	0.300	0.600	Abbott Architect Albumin BCG 2
	g/l	39.8	33.8	45.8	3.00	6.00	
	g/dl	3.86	3.28	4.44	0.290	0.580	Abbott Architect Albumin BCP 2
	g/l	38.6	32.8	44.4	2.90	5.80	
	g/dl	3.95	3.36	4.54	0.295	0.590	Bromocresol Green
	g/l	39.5	33.6	45.4	2.95	5.90	
	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Purple
	g/l	39.7	33.7	45.7	3.00	6.00	
Alkaline Phosphatase	U/l	195	166	224	14.5	29.0	Abbott Architect Alkaline Phosphatase 2
	U/l	194	165	223	14.5	29.0	AMP non-optimised
	U/l	192	163	221	14.5	29.0	AMP optimised to IFCC
	U/l	181	154	208	13.5	27.0	Colorimetric
	U/l	195	166	224	14.5	29.0	Other AMP kits
ALT (GPT)	U/l	38	30	46	4.00	8.00	Abbott Architect ALT 2
	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	56	48	64	4.00	8.00	Immunoinhibition, EPS substrate
Amylase Total	U/l	82	70	94	6.00	12.0	Abbott Architect Amylase 2
	U/l	81	69	93	6.00	12.0	Abbott Architect/Alinity cal factor 3431
	U/l	83	71	95	6.00	12.0	Abbott Architect/Alinity cal factor 3806
	U/l	81	69	93	6.00	12.0	Abbott blocked pNPG7
AST (GOT)	U/l	39	31	47	4.00	8.00	Abbott Architect AST 2
	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	11.0	8.72	13.3	1.15	2.30	PEP Carboxylase
Bile Acids	µmol/l	26.8	21.4	32.2	2.70	5.40	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.15	0.909	1.39	0.120	0.240	Diazo with Dichloroanaline
	µmol/l	19.6	15.5	23.7	2.05	4.10	
	mg/dl	1.14	0.901	1.38	0.120	0.240	Diazo With Sulphanilic Acid
	µmol/l	19.5	15.4	23.6	2.05	4.10	
	mg/dl	1.12	0.885	1.36	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.1	15.1	23.1	2.00	4.00	
Bilirubin Total	mg/dl	1.74	1.37	2.11	0.185	0.370	Abbott Alin/Arch cal batch no >97447/8/9
	µmol/l	29.8	23.5	36.1	3.15	6.30	
	mg/dl	1.78	1.41	2.15	0.185	0.370	Abbott Architect Total Bilirubin 2
	µmol/l	30.5	24.1	36.9	3.20	6.40	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Diazo With Dichloroaniline
	µmol/l	29.0	22.9	35.1	3.05	6.10	
	mg/dl	1.73	1.37	2.09	0.180	0.360	Diazo With Sulphanilic Acid
	µmol/l	29.6	23.4	35.8	3.10	6.20	

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Abbott Architect c Systems

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Bilirubin Total	mg/dl	1.73	1.37	2.09	0.180	0.360	Diazonium Ion
	µmol/l	29.6	23.4	35.8	3.10	6.20	
Calcium	mg/dl	8.46	7.61	9.31	0.425	0.850	Arsenazo III
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Chloride	mmol/l	101	92.9	109	4.00	8.00	ISE Indirect
Cholesterol	mg/dl	154	134	174	10.0	20.0	Abbott Architect Cholesterol 2
	mmol/l	4.00	3.48	4.52	0.260	0.520	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.00	3.48	4.52	0.260	0.520	
	mg/dl	155	135	175	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	4.02	3.50	4.54	0.260	0.520	
Cholinesterase	U/l	7019	5615	8423	702	1404	Colorimetric - Butyrylthiocholine
CK Total	U/l	202	166	238	18.0	36.0	Abbott CK-NAC (IFCC)
	U/l	201	165	237	18.0	36.0	CK-NAC (IFCC)
	U/l	205	168	242	18.5	37.0	CK-NAC serum start (DGKC)
	U/l	204	167	241	18.5	37.0	CK-NAC substrate start (DGKC)
Copper	µg/dl	80.2	64.2	96.2	8.00	16.0	Colorimetric
	µmol/l	12.6	10.1	15.1	1.25	2.50	
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Abbott Architect Creatinine 2
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.38	1.10	1.66	0.140	0.280	Alkaline Picrate With Deproteinisation
	µmol/l	122	97.6	146	12.0	24.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe Rate Blanked
	µmol/l	124	99.2	149	12.5	25.0	
gamma-GT	U/l	63	54	72	4.50	9.00	Abbott Architect GGT 2
	U/l	59	50	68	4.50	9.00	DCL, gamma glut.-3-carb.-4-nitro.
	U/l	60	51	69	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	62	53	71	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Oxidase
	mmol/l	6.00	5.10	6.90	0.450	0.900	
	mg/dl	108	91.8	124	8.00	16.0	Hexokinase
	mmol/l	5.97	5.07	6.87	0.450	0.900	
HDL - Cholesterol	mg/dl	51.4	43.7	59.1	3.85	7.70	Direct HDL, Clearance method
	mmol/l	1.33	1.13	1.53	0.100	0.200	
	mg/dl	52.5	44.6	60.4	3.95	7.90	Direct HDL, Immunoseparation
	mmol/l	1.36	1.16	1.56	0.100	0.200	

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Abbott Architect c Systems

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
HDL - Cholesterol	mg/dl	51.0	43.4	58.6	3.80	7.60	Direct HDL, PPD
	mmol/l	1.32	1.12	1.52	0.100	0.200	
	mg/dl	51.0	43.4	58.6	3.80	7.60	HDL Ultra/Accel Selective Detergent
	mmol/l	1.32	1.12	1.52	0.100	0.200	
Iron	µg/dl	113	92.7	133	10.0	20.0	Abbott Architect Chemilum
	µmol/l	20.2	16.6	23.8	1.80	3.60	
	µg/dl	113	92.7	133	10.0	20.0	Colorimetric with ppt.
	µmol/l	20.3	16.6	24.0	1.85	3.70	
	µg/dl	114	93.5	135	10.5	21.0	Colorimetric without ppt.
	µmol/l	20.4	16.7	24.1	1.85	3.70	
Lactate	mg/dl	12.8	10.5	15.1	1.15	2.30	Colorimetric - Lactate oxidase
	mmol/l	1.42	1.16	1.68	0.130	0.260	
LD (LDH)	U/l	190	162	218	14.0	28.0	Abbott Architect LD 2
	U/l	191	162	220	14.5	29.0	L to P, IFCC
	U/l	195	166	224	14.5	29.0	Lactate to Pyruvate methods
Lipase	U/l	38	30	46	4.00	8.00	Other Colorimetric
Lithium	mg/dl	0.665	0.585	0.745	0.040	0.080	Spectrophotometric
	mmol/l	0.958	0.843	1.07	0.056	0.112	
Magnesium	mg/dl	2.25	1.98	2.52	0.135	0.270	Arsenazo III
	mmol/l	0.927	0.816	1.04	0.057	0.113	
	mg/dl	2.27	2.00	2.54	0.135	0.270	Enzymatic
	mmol/l	0.934	0.822	1.05	0.058	0.116	
	mg/dl	2.29	2.02	2.56	0.135	0.270	Xylidyl Blue
	mmol/l	0.942	0.829	1.06	0.059	0.118	
Osmolality	mOsm/Kg	288	230	346	29.0	58.0	Calculated
Phosphate Inorganic	mg/dl	4.99	4.24	5.74	0.375	0.750	Phosphomolybdate Enzymatic
	mmol/l	1.61	1.37	1.85	0.120	0.240	
	mg/dl	4.93	4.19	5.67	0.370	0.740	Phosphomolybdate UV
	mmol/l	1.59	1.35	1.83	0.120	0.240	
Potassium	mmol/l	3.81	3.51	4.11	0.150	0.300	ISE method - indirect
Protein Total	g/dl	5.96	4.77	7.15	0.595	1.19	Abbott Architect total Protein 2
	g/l	59.6	47.7	71.5	5.95	11.9	
	g/dl	5.90	4.72	7.08	0.590	1.18	Biuret reaction, end point
	g/l	59.0	47.2	70.8	5.90	11.8	
	g/dl	6.06	4.85	7.27	0.605	1.21	Biuret reaction, kinetic
	g/l	60.6	48.5	72.7	6.05	12.1	
PSA Total	ng/ml = µg/l	7.51	5.63	9.39	0.940	1.88	Abbott Architect/ Alinity

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Abbott Architect c Systems

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.17	0.936	1.40	0.115	0.230	Abbott Architect
TIBC	µg/dl	228	180	276	24.0	48.0	FE+UIBC(saturation with iron)
	µmol/l	40.8	32.2	49.4	4.30	8.60	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Abbott Architect Triglyceride 2
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GK UV. no correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
	mg/dl	95.6	80.3	111	7.70	15.4	Lipase/Glycerol Dehydrogenase
	mmol/l	1.08	0.907	1.25	0.085	0.170	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	48.7	41.4	56.0	3.65	7.30	Abbott Architect Urea Nitrogen 2
	mg/dl (BUN)	22.7	19.3	26.1	1.70	3.40	
	mmol/l	8.11	6.89	9.33	0.610	1.22	
	mg/dl	49.5	42.1	56.9	3.70	7.40	Urease, end point
	mg/dl (BUN)	23.0	19.6	26.4	1.70	3.40	
	mmol/l	8.23	7.00	9.46	0.615	1.23	
	mg/dl	47.7	40.5	54.9	3.60	7.20	Urease, kinetic
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.94	6.75	9.13	0.595	1.19	
Uric Acid (Urate)	mg/dl	6.00	5.22	6.78	0.390	0.780	Abbott Architect Uric Acid 2
	mmol/l	0.357	0.311	0.403	0.023	0.046	
	mg/dl	5.98	5.20	6.76	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.356	0.310	0.402	0.023	0.046	
	mg/dl	6.02	5.24	6.80	0.390	0.780	Uricase Perox. with ascorb. ox
	mmol/l	0.358	0.311	0.405	0.024	0.047	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.362	0.315	0.409	0.024	0.047	

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Abbott Architect i Systems

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml | **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.31	0.983	1.64	0.165	0.330	Abbott Architect
	pg/ml	13.1	9.83	16.4	1.65	3.30	
	pmol/l	16.8	12.6	21.0	2.10	4.20	
PSA Total	ng/ml = µg/l	7.71	5.78	9.64	0.965	1.93	Abbott Architect/ Alinity
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.16	0.928	1.39	0.115	0.230	Abbott Architect
Total T3	ng/dl	119	89.3	149	15.0	30.0	Abbott Architect
	ng/ml	1.20	0.900	1.50	0.150	0.300	
	nmol/l	1.84	1.38	2.30	0.230	0.460	
Total T4	ng/ml	70.4	52.8	88.0	8.80	17.6	Abbott Architect
	nmol/l	90.3	67.7	113	11.4	22.7	
	µg/dl	7.04	5.28	8.80	0.880	1.76	

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Abbott Architect Systems (Archem Reagents)

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.20	3.57	4.83	0.315	0.630	Bromocresol Green
	g/l	42.0	35.7	48.3	3.15	6.30	
Alkaline Phosphatase	U/l	189	161	217	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	84	71	97	6.50	13.0	Abbott Architect Amylase 2
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.09	0.861	1.32	0.115	0.230	Diazo With Sulphanilic Acid
	µmol/l	18.6	14.7	22.5	1.95	3.90	
Bilirubin Total	mg/dl	2.21	1.75	2.67	0.230	0.460	Diazo With Sulphanilic Acid
	µmol/l	37.8	29.9	45.7	3.95	7.90	
Calcium	mg/dl	9.10	8.19	10.0	0.450	0.900	Arsenazo III
	mmol/l	2.27	2.04	2.50	0.115	0.230	
Cholesterol	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.11	3.58	4.64	0.265	0.530	
CK Total	U/l	222	182	262	20.0	40.0	CK-NAC substrate start (DGKC)
Copper	µg/dl	122	97.6	146	12.0	24.0	Colorimetric
	µmol/l	19.1	15.3	22.9	1.90	3.80	
Creatinine	mg/dl	1.37	1.10	1.64	0.135	0.270	Abbott Architect Creatinine 2
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.56	1.25	1.87	0.155	0.310	Alkaline picrate no deproteinisation
	µmol/l	138	110	166	14.0	28.0	
gamma-GT	U/l	70	60	80	5.00	10.0	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.33	5.38	7.28	0.475	0.950	
	mg/dl	108	91.8	124	8.00	16.0	Hexokinase
	mmol/l	6.00	5.10	6.90	0.450	0.900	
HDL - Cholesterol	mg/dl	46.3	39.4	53.2	3.45	6.90	HDL Ultra/Accel Selective Detergent
	mmol/l	1.20	1.02	1.38	0.090	0.180	
Iron	µg/dl	99.5	81.6	117	8.75	17.5	Colorimetric without ppt.
	µmol/l	17.8	14.6	21.0	1.60	3.20	
LD (LDH)	U/l	392	333	451	29.5	59.0	P to L, German methods
Lipase	U/l	41	33	49	4.00	8.00	Colorimetric Randox
Magnesium	mg/dl	2.41	2.12	2.70	0.145	0.290	Xylidyl Blue
	mmol/l	0.990	0.871	1.11	0.060	0.120	
Phosphate Inorganic	mg/dl	5.58	4.74	6.42	0.420	0.840	Phosphomolybdate UV
	mmol/l	1.80	1.53	2.07	0.135	0.270	
Protein Total	g/dl	5.90	4.72	7.08	0.590	1.18	Abbott Architect total Protein 2
	g/l	59.0	47.2	70.8	5.90	11.8	

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RANDOX

Abbott Architect Systems (Archem Reagents)

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Protein Total	g/dl	5.94	4.75	7.13	0.595	1.19	Biuret reaction, end point
	g/l	59.4	47.5	71.3	5.95	11.9	
Triglycerides	mg/dl	95.6	80.3	111	7.70	15.4	Lipase/GPO-PAP No Correction
	mmol/l	1.08	0.907	1.25	0.085	0.170	
Urea	mg/dl	52.1	44.3	59.9	3.90	7.80	Urease, kinetic
	mg/dl (BUN)	24.3	20.7	27.9	1.80	3.60	
	mmol/l	8.67	7.37	9.97	0.650	1.30	
Uric Acid (Urate)	mg/dl	6.17	5.37	6.97	0.400	0.800	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.367	0.319	0.415	0.024	0.048	
Zinc	µg/dl	202	162	242	20.0	40.0	Colorimetric without deprot.
	µmol/l	30.9	24.7	37.1	3.10	6.20	

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RANDOX

Advanced Instruments Micro Osmometer 3300/3320

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/Kg	310	248	372	31.0	62.0	Freezing Point Depression

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Advanced Instruments Osmometer

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/Kg	312	250	374	31.0	62.0	Freezing Point Depression

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Agappe Mispa CCXL

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.15	3.53	4.77	0.310	0.620	Agappe - Bromocresol Green
	g/l	41.5	35.3	47.7	3.10	6.20	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Agappe - IFCC
Amylase Total	U/l	77	65	89	6.00	12.0	Agappe - CNPG3
AST (GOT)	U/l	35	28	42	3.50	7.00	Agappe - IFCC
Bilirubin Direct	mg/dl	0.661	0.522	0.800	0.070	0.139	Agappe - DIAZO
	µmol/l	11.3	8.93	13.7	1.20	2.40	
Bilirubin Total	mg/dl	1.63	1.29	1.97	0.170	0.340	Agappe - TAB
	µmol/l	27.9	22.0	33.8	2.95	5.90	
Calcium	mg/dl	8.66	7.79	9.53	0.435	0.870	Agappe - ARSENAZO
	mmol/l	2.16	1.94	2.38	0.110	0.220	
Cholesterol	mg/dl	146	127	165	9.50	19.0	Agappe - CHOD-PAP
	mmol/l	3.79	3.30	4.28	0.245	0.490	
CK Total	U/l	209	171	247	19.0	38.0	Gel Agglutination
Creatinine	mg/dl	1.51	1.21	1.81	0.150	0.300	Agappe - JAFFE'S KINETIC
	µmol/l	134	107	161	13.5	27.0	
gamma-GT	U/l	62	53	71	4.50	9.00	Agappe - SZASZ KINETIC
Glucose	mg/dl	109	92.7	125	8.00	16.0	Agappe - GOD-PAP
	mmol/l	6.05	5.14	6.96	0.455	0.910	
HDL - Cholesterol	mg/dl	45.9	39.0	52.8	3.45	6.90	Agappe - SELECTIVE INHIBITION
	mmol/l	1.19	1.01	1.37	0.090	0.180	
Iron	µg/dl	124	102	146	11.0	22.0	Agappe - CHROMAZUROL
	µmol/l	22.2	18.2	26.2	2.00	4.00	
LD (LDH)	U/l	421	358	484	31.5	63.0	Agappe - SCE
Lipase	U/l	35	28	42	3.50	7.00	Agappe - METHYL RESORUFIN
Magnesium	mg/dl	2.29	2.02	2.56	0.135	0.270	Agappe - XYLIDYL BLUE
	mmol/l	0.941	0.828	1.05	0.055	0.109	
Phosphate Inorganic	mg/dl	5.21	4.43	5.99	0.390	0.780	Agappe - PHOSPOHMOLYBDATE
	mmol/l	1.68	1.43	1.93	0.125	0.250	
Protein Total	g/dl	5.68	4.54	6.82	0.570	1.14	Agappe Ultra Stik
	g/l	56.8	45.4	68.2	5.70	11.4	
Triglycerides	mg/dl	92.9	78.0	108	7.55	15.1	Quidel Triage Meter Plus
	mmol/l	1.05	0.882	1.22	0.085	0.170	
Urea	mg/dl	45.7	38.8	52.6	3.45	6.90	Agappe Ultra Stik
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
	mmol/l	7.60	6.46	8.74	0.570	1.14	
Uric Acid (Urate)	mg/dl	6.39	5.56	7.22	0.415	0.830	Agappe - URICASE - PAP
	mmol/l	0.380	0.331	0.429	0.025	0.049	

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Agappe Mispa CXL Pro

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.16	3.54	4.78	0.310	0.620	Agappe - Bromocresol Green
	g/l	41.6	35.4	47.8	3.10	6.20	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Agappe - IFCC
Amylase Total	U/l	77	65	89	6.00	12.0	Agappe - CNPG3
AST (GOT)	U/l	34	27	41	3.50	7.00	Agappe - IFCC
Bilirubin Direct	mg/dl	0.667	0.527	0.807	0.070	0.140	Agappe - DIAZO
	µmol/l	11.4	9.01	13.8	1.20	2.40	
Bilirubin Total	mg/dl	1.66	1.31	2.01	0.175	0.350	Agappe - TAB
	µmol/l	28.3	22.4	34.2	2.95	5.90	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	Agappe - ARSENAZO
	mmol/l	2.13	1.92	2.34	0.105	0.210	
Cholesterol	mg/dl	145	126	164	9.50	19.0	Agappe - CHOD-PAP
	mmol/l	3.75	3.26	4.24	0.245	0.490	
CK Total	U/l	206	169	243	18.5	37.0	Gel Agglutination
Creatinine	mg/dl	1.46	1.17	1.75	0.145	0.290	Agappe - ENZYMATIC
	µmol/l	129	103	155	13.0	26.0	
	mg/dl	1.50	1.20	1.80	0.150	0.300	Agappe - JAFFE'S KINETIC
	µmol/l	133	106	160	13.5	27.0	
gamma-GT	U/l	62	53	71	4.50	9.00	Agappe - SZASZ KINETIC
Glucose	mg/dl	109	92.7	125	8.00	16.0	Agappe - GOD-PAP
	mmol/l	6.04	5.13	6.95	0.455	0.910	
HDL - Cholesterol	mg/dl	46.3	39.4	53.2	3.45	6.90	Agappe - SELECTIVE INHIBITION
	mmol/l	1.20	1.02	1.38	0.090	0.180	
Iron	µg/dl	115	94.3	136	10.5	21.0	Agappe - CHROMAZUROL
	µmol/l	20.5	16.8	24.2	1.85	3.70	
LD (LDH)	U/l	422	359	485	31.5	63.0	Agappe - SCE
Lipase	U/l	34	27	41	3.50	7.00	Agappe - METHYL RESORUFIN
Magnesium	mg/dl	2.28	2.01	2.55	0.135	0.270	Agappe - XYLIDYL BLUE
	mmol/l	0.938	0.825	1.05	0.056	0.112	
Phosphate Inorganic	mg/dl	5.15	4.38	5.92	0.385	0.770	Agappe - PHOSPOHMOLYBDATE
	mmol/l	1.66	1.41	1.91	0.125	0.250	
Protein Total	g/dl	5.59	4.47	6.71	0.560	1.12	Agappe Ultra Stik
	g/l	55.9	44.7	67.1	5.60	11.2	
Triglycerides	mg/dl	89.4	75.1	104	7.30	14.6	Quidel Triage Meter Plus
	mmol/l	1.01	0.848	1.17	0.080	0.160	
Urea	mg/dl	46.4	39.4	53.4	3.50	7.00	Agappe Ultra Stik
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.72	6.56	8.88	0.580	1.16	

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Agappe Mispa CXL Pro

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mg/dl	6.30	5.48	7.12	0.410	0.820	Agappe - URICASE - PAP
	mmol/l	0.375	0.326	0.424	0.025	0.049	

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Agappe Mispa Nano

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.04	3.43	4.65	0.305	0.610	Agappe - Bromocresol Green
	g/l	40.4	34.3	46.5	3.05	6.10	
	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Green
	g/l	39.7	33.7	45.7	3.00	6.00	
Alkaline Phosphatase	U/l	190	162	218	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	41	33	49	4.00	8.00	Agappe - IFCC
	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Agappe - IFCC
Bilirubin Total	mg/dl	1.63	1.29	1.97	0.170	0.340	Agappe - DMSO
	µmol/l	27.9	22.0	33.8	2.95	5.90	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Agappe - TAB
	µmol/l	29.0	22.9	35.1	3.05	6.10	
	mg/dl	1.74	1.37	2.11	0.185	0.370	Diazo With Sulphanilic Acid
	µmol/l	29.8	23.5	36.1	3.15	6.30	
Calcium	mg/dl	8.82	7.94	9.70	0.440	0.880	Agappe - ARSENAZO
	mmol/l	2.20	1.98	2.42	0.110	0.220	
	mg/dl	8.70	7.83	9.57	0.435	0.870	Arsenazo III
	mmol/l	2.17	1.95	2.39	0.110	0.220	
Cholesterol	mg/dl	150	131	169	9.50	19.0	Agappe - CHOD-PAP
	mmol/l	3.89	3.38	4.40	0.255	0.510	
	mg/dl	155	135	175	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.02	3.50	4.54	0.260	0.520	
Creatinine	mg/dl	1.50	1.20	1.80	0.150	0.300	Agappe - ENZYMATIC
	µmol/l	133	106	160	13.5	27.0	
	mg/dl	1.38	1.10	1.66	0.140	0.280	Agappe - JAFFE'S KINETIC
	µmol/l	122	97.6	146	12.0	24.0	
gamma-GT	U/l	67	57	77	5.00	10.0	Agappe - SZASZ KINETIC
Glucose	mg/dl	114	96.9	131	8.50	17.0	Agappe - GOD-PAP
	mmol/l	6.35	5.40	7.30	0.475	0.950	
	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.16	5.24	7.08	0.460	0.920	
HDL - Cholesterol	mg/dl	46.3	39.4	53.2	3.45	6.90	Agappe - SELECTIVE INHIBITION
	mmol/l	1.20	1.02	1.38	0.090	0.180	
Phosphate Inorganic	mg/dl	5.18	4.40	5.96	0.390	0.780	Agappe - PHOSPOHMOLYBDATE
	mmol/l	1.67	1.42	1.92	0.125	0.250	
	mg/dl	5.18	4.40	5.96	0.390	0.780	Phosphomolybdate UV
	mmol/l	1.67	1.42	1.92	0.125	0.250	

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Agappe Mispa Nano

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Protein Total	g/dl	5.70	4.56	6.84	0.570	1.14	Agappe Ultra Stik
	g/l	57.0	45.6	68.4	5.70	11.4	
Triglycerides	mg/dl	95.6	80.3	111	7.70	15.4	Quidel Triage Meter Plus
	mmol/l	1.08	0.907	1.25	0.085	0.170	
Urea	mg/dl	45.4	38.6	52.2	3.40	6.80	Agappe Ultra Stik
	mg/dl (BUN)	21.1	17.9	24.3	1.60	3.20	
	mmol/l	7.55	6.42	8.68	0.565	1.13	
	mg/dl	47.1	40.0	54.2	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.0	18.7	25.3	1.65	3.30	
	mmol/l	7.84	6.66	9.02	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.40	5.57	7.23	0.415	0.830	Agappe - URICASE - PAP
	mmol/l	0.381	0.331	0.431	0.025	0.050	
	mg/dl	6.37	5.54	7.20	0.415	0.830	Agappe - URICASE - TOPS
	mmol/l	0.379	0.330	0.428	0.025	0.049	
	mg/dl	6.02	5.24	6.80	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.358	0.311	0.405	0.024	0.047	

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AMS Instruments SAT Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.97	3.45	4.49	0.260	0.520	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
Glucose	mg/dl	107	91.0	123	8.00	16.0	Glucose Oxidase
	mmol/l	5.95	5.06	6.84	0.445	0.890	
Triglycerides	mg/dl	92.0	77.3	107	7.50	15.0	Lipase/GPO-PAP No Correction
	mmol/l	1.04	0.874	1.21	0.085	0.170	
Uric Acid (Urate)	mg/dl	5.97	5.19	6.75	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.355	0.309	0.401	0.023	0.046	

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Arkray OM-6050/OM-6060

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/Kg	308	246	370	31.0	62.0	Freezing Point Depression

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Autolumo A1000/2000/1820/1860/6200/6600

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.65	1.24	2.06	0.205	0.410	Autobio CLIA
	pg/ml	16.5	12.4	20.6	2.05	4.10	
	pmol/l	21.2	15.9	26.5	2.65	5.30	
PSA Total	ng/ml = µg/l	8.31	6.23	10.4	1.05	2.09	Autobio CLIA
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.74	1.39	2.09	0.175	0.350	Autobio CLIA

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RANDOX

Awareness Technology Inc.
Awareness Technologies ChemWell Analysers

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Glucose	mg/dl	107	91.0	123	8.00	16.0	Glucose Oxidase
	mmol/l	5.95	5.06	6.84	0.445	0.890	

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RANDOX

Awareness Technology Inc. Stat-Fax/ ALS-2000

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Creatinine	mg/dl	1.47	1.18	1.76	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	130	104	156	13.0	26.0	
Glucose	mg/dl	103	87.6	118	7.50	15.0	Glucose Oxidase
	mmol/l	5.73	4.87	6.59	0.430	0.860	

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BD Biosciences Beacon Diagnostics B-200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.57	3.03	4.11	0.270	0.540	Bromocresol Green
	g/l	35.7	30.3	41.1	2.70	5.40	
Bilirubin Total	mg/dl	1.76	1.39	2.13	0.185	0.370	Diazo With Sulphanilic Acid
	µmol/l	30.0	23.7	36.3	3.15	6.30	
Calcium	mg/dl	9.14	8.23	10.1	0.480	0.960	Arsenazo III
	mmol/l	2.28	2.05	2.51	0.115	0.230	
Protein Total	g/dl	5.06	4.05	6.07	0.505	1.01	Biuret reaction, end point
	g/l	50.6	40.5	60.7	5.05	10.1	
Urea	mg/dl	44.4	37.7	51.1	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	20.7	17.6	23.8	1.55	3.10	
	mmol/l	7.39	6.28	8.50	0.555	1.11	

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RANDOX

Beckman Coulter Access Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.42	1.07	1.77	0.175	0.350	Beckman Access/LXi725
	pg/ml	14.2	10.7	17.7	1.75	3.50	
	pmol/l	18.2	13.7	22.7	2.25	4.50	
PSA Total	ng/ml = µg/l	11.3	9.04	13.6	1.15	2.30	Beckman Access standardised to Hybritech
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.37	1.10	1.64	0.135	0.270	Access/LXi725 hyper TSH 3rd gen.
	µU/ml = mlU/l	1.34	1.07	1.61	0.135	0.270	Beckman DXI600/800/ Access 2 (3rd IS)

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Beckman Coulter AU Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	High	1SD	2SD	Method
Albumin	g/dl	3.89	3.31	4.47	0.290	0.580	Bromocresol Green
	g/l	38.9	33.1	44.7	2.90	5.80	
	g/dl	3.88	3.30	4.46	0.290	0.580	Bromocresol Purple
	g/l	38.8	33.0	44.6	2.90	5.80	
	g/dl	3.83	3.26	4.40	0.285	0.570	Nephelometric Assays
	g/l	38.3	32.6	44.0	2.85	5.70	
Alkaline Phosphatase	U/l	196	167	225	14.5	29.0	AMP non-optimised
	U/l	204	173	235	15.5	31.0	AMP optimised to IFCC
	U/l	204	173	235	15.5	31.0	Beckman AMP (Calibrator)
	U/l	184	156	212	14.0	28.0	Beckman AMP (Extinction Coeff)
	U/l	192	163	221	14.5	29.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	36	29	43	3.50	7.00	Beckman (Extinction Coefficient)
	U/l	43	34	52	4.50	9.00	Beckman IFCC Ref. with P5P
	U/l	43	34	52	4.50	9.00	Beckman Mod. IFCC Ref. without P5P
	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	53	45	61	4.00	8.00	Immunoinhibition, EPS substrate
Amylase Total	U/l	78	66	90	6.00	12.0	Amyloclastic Methods
	U/l	82	70	94	6.00	12.0	Beckman blocked pNPG7
	U/l	75	64	86	5.50	11.0	Beckman CNPG3 (Extinction Coeff)
	U/l	74	63	85	5.50	11.0	Beckman CNPG3 (Master Cal)
	U/l	79	67	91	6.00	12.0	Beckman maltotetraose
	U/l	85	72	98	6.50	13.0	Beckman Synchron AMY7
	U/l	83	71	95	6.00	12.0	bioMerieux 2-chloro-pNPG3
	U/l	77	65	89	6.00	12.0	Human CNPG3 (IFCC)
	U/l	80	68	92	6.00	12.0	pNP Maltotrioside substrates
	U/l	87	74	100	6.50	13.0	Randox Liquid Ethylidene pNPG7
	U/l	73	62	84	5.50	11.0	Siemens/Dade Behring 2-chloro-pNPG3
AST (GOT)	U/l	30	24	36	3.00	6.00	Beckman (Extinction Coefficient)
	U/l	39	31	47	4.00	8.00	Beckman IFCC Ref. with P5P
	U/l	39	31	47	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
	U/l	37	30	44	3.50	7.00	Tris buffer, SCE
Bicarbonate	mmol/l	12.7	10.1	15.3	1.30	2.60	Enzymatic
	mmol/l	13.0	10.3	15.7	1.35	2.70	PEP Carboxylase
Bile Acids	µmol/l	26.0	20.8	31.2	2.60	5.20	Enzymatic Colorimetric
	µmol/l	26.5	21.2	31.8	2.65	5.30	Enzymatic Colorimetric - Sentinel
Bilirubin Direct	mg/dl	1.17	0.924	1.42	0.125	0.250	Diazo with Dichloroanaline
	µmol/l	20.0	15.8	24.2	2.10	4.20	

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Beckman Coulter AU Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Bilirubin Direct	mg/dl	1.16	0.916	1.40	0.120	0.240	Diazo/Sulphanilic Beckman DxC
	µmol/l	19.8	15.6	24.0	2.10	4.20	
	mg/dl	1.16	0.916	1.40	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.9	15.7	24.1	2.10	4.20	
	mg/dl	1.10	0.869	1.33	0.115	0.230	Oxidation to Biliverdin/Vanadate
	µmol/l	18.8	14.9	22.7	1.95	3.90	
Bilirubin Total	mg/dl	1.87	1.48	2.26	0.195	0.390	Diazo With Dichloroaniline
	µmol/l	31.9	25.2	38.6	3.35	6.70	
	mg/dl	1.93	1.52	2.34	0.205	0.410	Diazo With Sulphanilic Acid
	µmol/l	33.0	26.1	39.9	3.45	6.90	
	mg/dl	1.95	1.54	2.36	0.205	0.410	Diazonium Ion
	µmol/l	33.3	26.3	40.3	3.50	7.00	
	mg/dl	1.93	1.52	2.34	0.205	0.410	Dichlorophenyl Diazonium
	µmol/l	33.0	26.1	39.9	3.45	6.90	
	mg/dl	1.91	1.51	2.31	0.200	0.400	DPD (Beckman AU)
	µmol/l	32.7	25.8	39.6	3.45	6.90	
	mg/dl	1.94	1.53	2.35	0.205	0.410	Oxidation to Biliverdin/Vanadate
	µmol/l	33.2	26.2	40.2	3.50	7.00	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.58	7.72	9.44	0.430	0.860	Cresolphthalein Complexone
	mmol/l	2.14	1.93	2.35	0.105	0.210	
	mg/dl	8.66	7.79	9.53	0.435	0.870	Ion Selective Electrode
	mmol/l	2.16	1.94	2.38	0.110	0.220	
	mg/dl	8.50	7.65	9.35	0.425	0.850	NM-BAPTA
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Calcium Ionised	mg/dl	4.21	3.79	4.63	0.210	0.420	Ion Selective Electrode
	mmol/l	1.05	0.945	1.16	0.055	0.110	
	mg/dl	4.41	3.97	4.85	0.220	0.440	Spectrophotometric
	mmol/l	1.10	0.990	1.21	0.055	0.110	
Chloride	mmol/l	99.7	91.7	108	4.15	8.30	Colorimetric
	mmol/l	98.5	90.6	106	3.75	7.50	ISE Indirect
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	3.97	3.45	4.49	0.260	0.520	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.99	3.47	4.51	0.260	0.520	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.95	3.44	4.46	0.255	0.510	
Cholinesterase	U/l	5549	4439	6659	555	1110	Colorimetric - Butyrylthiocholine

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Beckman Coulter AU Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
CK Total	U/l	215	176	254	19.5	39.0	Abbott CK-NAC (IFCC)
	U/l	188	154	222	17.0	34.0	Beckman CK-NAC (Extinction Coeff)
	U/l	214	175	253	19.5	39.0	Beckman CK-NAC (IFCC)
	U/l	213	175	251	19.0	38.0	CK-NAC (IFCC)
	U/l	200	164	236	18.0	36.0	CK-NAC serum start (DGKC)
	U/l	205	168	242	18.5	37.0	CK-NAC substrate start (DGKC)
	U/l	221	181	261	20.0	40.0	Monothioglycerol
Copper	µg/dl	102	81.6	122	10.0	20.0	Colorimetric
	µmol/l	16.0	12.8	19.2	1.60	3.20	
Creatinine	mg/dl	1.40	1.12	1.68	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.39	1.11	1.67	0.140	0.280	Alkaline Picrate With Deproteinisation
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.34	1.07	1.61	0.135	0.270	IDMS Traceable
	µmol/l	119	95.2	143	12.0	24.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe Rate Blanked
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.37	1.10	1.64	0.135	0.270	Jaffe rate blanked comp. (-33umol/l)
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.34	1.07	1.61	0.135	0.270	Jaffe rate comp. (-18umol/l)
	µmol/l	119	95.2	143	12.0	24.0	
D-3-Hydroxybutyrate	mmol/l	0.302	0.257	0.347	0.023	0.045	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Beckman Szasz (Extinction Coeff.)
	U/l	58	49	67	4.50	9.00	DCL, gamma glut.-3-carb.-4-nitro.
	U/l	56	48	64	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer
Glucose	mg/dl	106	90.1	122	8.00	16.0	Glucose Dehydrogenase
	mmol/l	5.88	5.00	6.76	0.440	0.880	
	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.09	5.18	7.00	0.455	0.910	
	mg/dl	109	92.7	125	8.00	16.0	GOD/02-Beckman method
	mmol/l	6.04	5.13	6.95	0.455	0.910	
	mg/dl	108	91.8	124	8.00	16.0	Hexokinase
	mmol/l	5.98	5.08	6.88	0.450	0.900	

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RANDOX

Beckman Coulter AU Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
HDL - Cholesterol	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL, Clearance method
	mmol/l	1.21	1.03	1.39	0.090	0.180	
	mg/dl	46.3	39.4	53.2	3.45	6.90	Direct HDL, Immunoseparation
	mmol/l	1.20	1.02	1.38	0.090	0.180	
	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL, PEGME
	mmol/l	1.21	1.03	1.39	0.090	0.180	
	mg/dl	47.1	40.0	54.2	3.55	7.10	Direct HDL, PPD
	mmol/l	1.22	1.04	1.40	0.090	0.180	
	mg/dl	51.4	43.7	59.1	3.85	7.70	HDL Ultra/Accel Selective Detergent
	mmol/l	1.33	1.13	1.53	0.100	0.200	
Iron	µg/dl	108	88.6	127	9.50	19.0	Colorimetric with ppt.
	µmol/l	19.4	15.9	22.9	1.75	3.50	
	µg/dl	108	88.6	127	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.3	15.8	22.8	1.75	3.50	
Lactate	mg/dl	12.0	9.84	14.2	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.33	1.09	1.57	0.120	0.240	
	mg/dl	10.9	8.94	12.9	1.00	2.00	UV-LDH
	mmol/l	1.21	0.992	1.43	0.110	0.220	
LD (LDH)	U/l	179	152	206	13.5	27.0	L to P Beckman (Extinction Coeff)
	U/l	195	166	224	14.5	29.0	L to P, IFCC
	U/l	194	165	223	14.5	29.0	Lactate to Pyruvate methods
	U/l	426	362	490	32.0	64.0	P to L Scandinavian & Dutch
	U/l	413	351	475	31.0	62.0	P to L, German methods
	U/l	198	168	228	15.0	30.0	Pyruvate 1.4 mM - Beckman LD-P
Lipase	U/l	44	35	53	4.50	9.00	Colorimetric Randox
Lithium	mg/dl	0.683	0.601	0.765	0.041	0.082	Spectrophotometric
	mmol/l	0.983	0.865	1.10	0.059	0.117	
Magnesium	mg/dl	2.33	2.05	2.61	0.140	0.280	Arsenazo III
	mmol/l	0.959	0.844	1.07	0.056	0.111	
	mg/dl	2.31	2.03	2.59	0.140	0.280	Calmagite
	mmol/l	0.951	0.837	1.07	0.060	0.119	
	mg/dl	2.34	2.06	2.62	0.140	0.280	Enzymatic
	mmol/l	0.963	0.847	1.08	0.059	0.117	
	mg/dl	2.26	1.99	2.53	0.135	0.270	Methylthymol Blue
	mmol/l	0.928	0.817	1.04	0.056	0.112	
	mg/dl	2.30	2.02	2.58	0.140	0.280	Xylidyl Blue
	mmol/l	0.947	0.833	1.06	0.057	0.113	
Osmolality	mOsm/Kg	292	234	350	29.0	58.0	Calculated

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Beckman Coulter AU Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Phosphate Inorganic	mg/dl	4.96	4.22	5.70	0.370	0.740	Beckman PHOSm kit (365nm)
	mmol/l	1.60	1.36	1.84	0.120	0.240	
	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate Enzymatic
	mmol/l	1.62	1.38	1.86	0.120	0.240	
	mg/dl	4.99	4.24	5.74	0.375	0.750	Phosphomolybdate UV
	mmol/l	1.61	1.37	1.85	0.120	0.240	
Potassium	mmol/l	3.82	3.51	4.13	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.59	4.47	6.71	0.560	1.12	Biuret reaction, CX4/5/7
	g/l	55.9	44.7	67.1	5.60	11.2	
	g/dl	5.65	4.52	6.78	0.565	1.13	Biuret reaction, end point
	g/l	56.5	45.2	67.8	5.65	11.3	
	g/dl	5.60	4.48	6.72	0.560	1.12	Biuret reaction, kinetic
	g/l	56.0	44.8	67.2	5.60	11.2	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µg/dl	239	189	289	25.0	50.0	Calculated from Transferrin
	µmol/l	42.7	33.7	51.7	4.50	9.00	
	µg/dl	253	200	306	26.5	53.0	Direct Colorimetric
	µmol/l	45.3	35.8	54.8	4.75	9.50	
	µg/dl	250	198	302	26.0	52.0	FE+UIBC(saturation with iron)
	µmol/l	44.8	35.4	54.2	4.70	9.40	
Total T4	ng/ml	78.8	59.1	98.5	9.85	19.7	Thermo Scientific / Microgenics DRI
	nmol/l	101	75.8	126	12.5	25.0	
	µg/dl	7.88	5.91	9.85	0.985	1.97	
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	95.6	80.3	111	7.70	15.4	Lipase/GK UV., 0.11 mmol/l correction
	mmol/l	1.08	0.907	1.25	0.085	0.170	
	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/Glycerol Dehydrogenase
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP No Correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
	mg/dl	94.7	79.5	110	7.65	15.3	Quidel Triage Meter Plus
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	46.5	39.5	53.5	3.50	7.00	Beckman - Conductivity
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.74	6.58	8.90	0.580	1.16	

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RANDOX

Beckman Coulter AU Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Urea	mg/dl	46.0	39.1	52.9	3.45	6.90	Urease - hypochlorite
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.66	6.51	8.81	0.575	1.15	
	mg/dl	46.7	39.7	53.7	3.50	7.00	Urease, end point
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.77	6.60	8.94	0.585	1.17	
	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.75	6.59	8.91	0.580	1.16	
Uric Acid (Urate)	mg/dl	6.10	5.31	6.89	0.395	0.790	Beckman AU Non US calibrator (66300)
	mmol/l	0.363	0.316	0.410	0.024	0.047	
	mg/dl	5.92	5.15	6.69	0.385	0.770	Beckman AU US calibrator (DR0070)
	mmol/l	0.352	0.306	0.398	0.023	0.046	
	mg/dl	5.93	5.16	6.70	0.385	0.770	Reduction Methods
	mmol/l	0.353	0.307	0.399	0.023	0.046	
	mg/dl	6.22	5.41	7.03	0.405	0.810	Uricase @ 293 nm
	mmol/l	0.370	0.322	0.418	0.024	0.048	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.362	0.315	0.409	0.024	0.047	
	mg/dl	6.10	5.31	6.89	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.363	0.316	0.410	0.024	0.047	
	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.359	0.312	0.406	0.024	0.047	
	mg/dl	6.29	5.47	7.11	0.410	0.820	Uricase, catalase 340nm.
	mmol/l	0.374	0.325	0.423	0.025	0.049	
Zinc	µg/dl	145	116	174	14.5	29.0	Colorimetric with deprot.
	µmol/l	22.2	17.8	26.6	2.20	4.40	
	µg/dl	143	114	172	14.5	29.0	Colorimetric without deprot.
	µmol/l	21.9	17.5	26.3	2.20	4.40	

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RANDOX

Beckman Coulter AU Series (Archem Reagent)

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.81	3.24	4.38	0.285	0.570	Bromocresol Green
	g/l	38.1	32.4	43.8	2.85	5.70	

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RANDOX

Beckman Coulter DxC600/DxC800

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.85	3.27	4.43	0.290	0.580	Bromocresol Purple
	g/l	38.5	32.7	44.3	2.90	5.80	
Alkaline Phosphatase	U/l	187	159	215	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	44	35	53	4.50	9.00	Beckman Mod. IFCC Ref. without P5P
Amylase Total	U/l	83	71	95	6.00	12.0	Beckman Synchron AMY7
AST (GOT)	U/l	40	32	48	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
Bilirubin Direct	mg/dl	1.15	0.909	1.39	0.120	0.240	Diazo/Sulphanilic Beckman DxC
	µmol/l	19.7	15.6	23.8	2.05	4.10	
Bilirubin Total	mg/dl	1.97	1.56	2.38	0.205	0.410	Diazo With Sulphanilic Acid
	µmol/l	33.7	26.6	40.8	3.55	7.10	
Calcium	mg/dl	8.42	7.58	9.26	0.420	0.840	Ion Selective Electrode
	mmol/l	2.10	1.89	2.31	0.105	0.210	
Chloride	mmol/l	97.6	89.8	105	3.70	7.40	ISE Indirect
Cholesterol	mg/dl	147	128	166	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.81	3.31	4.31	0.250	0.500	
Cholinesterase	U/l	5558	4446	6670	556	1112	Colorimetric - Butyrylthiocholine
CK Total	U/l	216	177	255	19.5	39.0	CK-NAC (IFCC)
	U/l	219	180	258	19.5	39.0	Monothioglycerol
Creatinine	mg/dl	1.32	1.06	1.58	0.130	0.260	Alkaline picrate no deproteinisation
	µmol/l	117	93.6	140	11.5	23.0	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
Glucose	mg/dl	106	90.1	122	8.00	16.0	Hexokinase
	mmol/l	5.90	5.02	6.78	0.440	0.880	
HDL - Cholesterol	mg/dl	47.1	40.0	54.2	3.55	7.10	Direct HDL, PPD
	mmol/l	1.22	1.04	1.40	0.090	0.180	
Iron	µg/dl	106	86.9	125	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.0	15.6	22.4	1.70	3.40	
LD (LDH)	U/l	190	162	218	14.0	28.0	Lactate to Pyruvate methods
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric
Magnesium	mg/dl	2.35	2.07	2.63	0.140	0.280	Calmagite
	mmol/l	0.968	0.852	1.08	0.056	0.112	
Phosphate Inorganic	mg/dl	4.96	4.22	5.70	0.370	0.740	Phosphomolybdate UV
	mmol/l	1.60	1.36	1.84	0.120	0.240	
Potassium	mmol/l	3.80	3.50	4.10	0.150	0.300	ISE method - indirect
Protein Total	g/dl	5.71	4.57	6.85	0.570	1.14	Biuret reaction, CX4/5/7
	g/l	57.1	45.7	68.5	5.70	11.4	

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RANDOX

Beckman Coulter DxC600/DxC800

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Protein Total	g/dl	5.53	4.42	6.64	0.555	1.11	Biuret reaction, end point
	g/l	55.3	44.2	66.4	5.55	11.1	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	92.9	78.0	108	7.55	15.1	Lipase/GPO-PAP No Correction
	mmol/l	1.05	0.882	1.22	0.085	0.170	
Urea	mg/dl	47.3	40.2	54.4	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.0	18.7	25.3	1.65	3.30	
	mmol/l	7.87	6.69	9.05	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.361	0.314	0.408	0.024	0.047	

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RANDOX

Besic CBS SERIES

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.05	3.65	4.45	0.200	0.400	Ion Selective Electrode
	mmol/l	1.01	0.909	1.11	0.050	0.100	

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Biobase BK Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.93	3.34	4.52	0.295	0.590	Bromocresol Green
	g/l	39.3	33.4	45.2	2.95	5.90	
Bilirubin Direct	mg/dl	0.872	0.689	1.06	0.094	0.188	Diazo With Sulphanilic Acid
	µmol/l	14.9	11.8	18.0	1.55	3.10	
Cholesterol	mg/dl	155	135	175	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	4.01	3.49	4.53	0.260	0.520	
Creatinine	mg/dl	1.33	1.06	1.60	0.135	0.270	Jaffe Rate Blanked
	µmol/l	118	94.4	142	12.0	24.0	
Glucose	mg/dl	121	103	139	9.00	18.0	Glucose Oxidase
	mmol/l	6.69	5.69	7.69	0.500	1.00	
Urea	mg/dl	47.7	40.5	54.9	3.60	7.20	Urease, kinetic
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.93	6.74	9.12	0.595	1.19	

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RANDOX

Biolabo Diagnostics Kenza 240 TX

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.11	3.49	4.73	0.310	0.620	Bromocresol Green
	g/l	41.1	34.9	47.3	3.10	6.20	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Cholesterol	mg/dl	151	131	171	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.92	3.41	4.43	0.255	0.510	
Glucose	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.03	5.13	6.93	0.450	0.900	
Urea	mg/dl	47.5	40.4	54.6	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.91	6.72	9.10	0.595	1.19	
Uric Acid (Urate)	mg/dl	6.45	5.61	7.29	0.420	0.840	Uricase perox. no ascorb. ox.
	mmol/l	0.384	0.334	0.434	0.025	0.050	

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Biolabo Diagnostics Kenza Biolabo Kenza 450 TX

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris Buffer Without P5P
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.32	5.37	7.27	0.475	0.950	
Urea	mg/dl	45.9	39.0	52.8	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.63	6.49	8.77	0.570	1.14	

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RANDOX

Biomerieux Vidas / Mini Vidas / Vidas 3

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.51	1.13	1.89	0.190	0.380	bioMerieux, VIDAS-FT4N Kit
	pg/ml	15.1	11.3	18.9	1.90	3.80	
	pmol/l	19.4	14.6	24.2	2.40	4.80	
PSA Total	ng/ml = µg/l	9.58	7.19	12.0	1.21	2.42	bioMerieux VIDAS TPSA
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.56	1.25	1.87	0.155	0.310	Biomerieux VIDAS TSH
Total T3	ng/dl	125	93.8	156	15.5	31.0	bioMerieux, VIDAS
	ng/ml	1.25	0.938	1.56	0.155	0.310	
	nmol/l	1.92	1.44	2.40	0.240	0.480	
Total T4	ng/ml	69.3	52.0	86.6	8.65	17.3	bioMerieux, VIDAS
	nmol/l	88.8	66.6	111	11.1	22.2	
	µg/dl	6.93	5.20	8.66	0.865	1.73	

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BioSystems A 15

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Green
	g/l	39.7	33.7	45.7	3.00	6.00	
Alkaline Phosphatase	U/l	189	161	217	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Calcium	mg/dl	9.02	8.12	9.92	0.450	0.900	Arsenazo III
	mmol/l	2.25	2.03	2.47	0.110	0.220	
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.04	3.51	4.57	0.265	0.530	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.95	3.44	4.46	0.255	0.510	
Creatinine	mg/dl	1.39	1.11	1.67	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Jaffe Rate Blanked
	µmol/l	131	105	157	13.0	26.0	
	mg/dl	1.33	1.06	1.60	0.135	0.270	Jaffe rate blanked comp. (-33umol/l)
	µmol/l	118	94.4	142	12.0	24.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.09	5.18	7.00	0.455	0.910	
Iron	µg/dl	102	83.6	120	9.00	18.0	Colorimetric without ppt.
	µmol/l	18.2	14.9	21.5	1.65	3.30	
Protein Total	g/dl	5.80	4.64	6.96	0.580	1.16	Biuret reaction, end point
	g/l	58.0	46.4	69.6	5.80	11.6	
Triglycerides	mg/dl	91.2	76.6	106	7.40	14.8	Lipase/GK UV. no correction
	mmol/l	1.03	0.865	1.20	0.085	0.170	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	44.0	37.4	50.6	3.30	6.60	Urease, end point
	mg/dl (BUN)	20.5	17.4	23.6	1.55	3.10	
	mmol/l	7.32	6.22	8.42	0.550	1.10	
	mg/dl	44.4	37.7	51.1	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	20.7	17.6	23.8	1.55	3.10	
	mmol/l	7.38	6.27	8.49	0.555	1.11	
Uric Acid (Urate)	mg/dl	6.02	5.24	6.80	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.358	0.311	0.405	0.024	0.047	

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BioSystems A 15

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	5.98	5.20	6.76	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.356	0.310	0.402	0.023	0.046	

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BioSystems A 200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.19	3.56	4.82	0.315	0.630	Bromocresol Green
	g/l	41.9	35.6	48.2	3.15	6.30	
Alkaline Phosphatase	U/l	204	173	235	15.5	31.0	AMP optimised to IFCC
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris Buffer Without P5P
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	0.983	0.777	1.19	0.104	0.207	Diazo With Sulphanilic Acid
	µmol/l	16.8	13.3	20.3	1.75	3.50	
Bilirubin Total	mg/dl	1.76	1.39	2.13	0.185	0.370	Diazo With Sulphanilic Acid
	µmol/l	30.0	23.7	36.3	3.15	6.30	
Calcium	mg/dl	8.66	7.79	9.53	0.435	0.870	Arsenazo III
	mmol/l	2.16	1.94	2.38	0.110	0.220	
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.00	3.48	4.52	0.260	0.520	
	mg/dl	161	140	182	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.17	3.63	4.71	0.270	0.540	
Creatinine	mg/dl	1.38	1.10	1.66	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	122	97.6	146	12.0	24.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-33umol/l)
	µmol/l	126	101	151	12.5	25.0	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Oxidase
	mmol/l	5.97	5.07	6.87	0.450	0.900	
HDL - Cholesterol	mg/dl	42.9	36.5	49.3	3.20	6.40	Direct HDL, Clearance method
	mmol/l	1.11	0.944	1.28	0.085	0.170	
	mg/dl	51.4	43.7	59.1	3.85	7.70	Direct HDL, PPD
	mmol/l	1.33	1.13	1.53	0.100	0.200	
Iron	µg/dl	99.5	81.6	117	8.75	17.5	Colorimetric without ppt.
	µmol/l	17.8	14.6	21.0	1.60	3.20	
LD (LDH)	U/l	199	169	229	15.0	30.0	L to P, IFCC
Phosphate Inorganic	mg/dl	5.18	4.40	5.96	0.390	0.780	Phosphomolybdate UV
	mmol/l	1.67	1.42	1.92	0.125	0.250	
Protein Total	g/dl	5.78	4.62	6.94	0.580	1.16	Biuret reaction, end point
	g/l	57.8	46.2	69.4	5.80	11.6	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	

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BioSystems A 200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Urea	mg/dl	43.9	37.3	50.5	3.30	6.60	Urease, kinetic
	mg/dl (BUN)	20.4	17.3	23.5	1.55	3.10	
	mmol/l	7.30	6.21	8.39	0.545	1.09	
Uric Acid (Urate)	mg/dl	6.17	5.37	6.97	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.367	0.319	0.415	0.024	0.048	
	mg/dl	6.29	5.47	7.11	0.410	0.820	Uricase Perox. with ascorb. ox
	mmol/l	0.374	0.325	0.423	0.025	0.049	

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BioSystems A 25

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.94	3.35	4.53	0.295	0.590	Bromocresol Green
	g/l	39.4	33.5	45.3	2.95	5.90	
Alkaline Phosphatase	U/l	197	167	227	15.0	30.0	AMP optimised to IFCC
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Cholesterol	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.13	3.59	4.67	0.270	0.540	
	mg/dl	149	130	168	9.50	19.0	Cholesterol Oxidase - IDMS
	mmol/l	3.87	3.37	4.37	0.250	0.500	
Creatinine	mg/dl	1.40	1.12	1.68	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.34	1.07	1.61	0.135	0.270	Jaffe Rate Blanked
	µmol/l	119	95.2	143	12.0	24.0	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.14	5.22	7.06	0.460	0.920	
Protein Total	g/dl	5.96	4.77	7.15	0.595	1.19	Biuret reaction, end point
	g/l	59.6	47.7	71.5	5.95	11.9	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	44.9	38.2	51.6	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	20.9	17.8	24.0	1.55	3.10	
	mmol/l	7.47	6.35	8.59	0.560	1.12	
Uric Acid (Urate)	mg/dl	6.13	5.33	6.93	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.365	0.318	0.412	0.024	0.047	
	mg/dl	6.17	5.37	6.97	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.367	0.319	0.415	0.024	0.048	

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BioSystems BA 400

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.09	3.48	4.70	0.305	0.610	Bromocresol Green
	g/l	40.9	34.8	47.0	3.05	6.10	
Alkaline Phosphatase	U/l	199	169	229	15.0	30.0	AMP optimised to IFCC
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	52	44	60	4.00	8.00	Immunoinhibition, EPS substrate
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.15	0.909	1.39	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.7	15.6	23.8	2.05	4.10	
Bilirubin Total	mg/dl	1.74	1.37	2.11	0.185	0.370	Diazo With Sulphanilic Acid
	µmol/l	29.8	23.5	36.1	3.15	6.30	
	mg/dl	1.76	1.39	2.13	0.185	0.370	Dichlorophenyl Diazonium
	µmol/l	30.0	23.7	36.3	3.15	6.30	
Calcium	mg/dl	8.50	7.65	9.35	0.425	0.850	Arsenazo III
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Cholesterol	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.13	3.59	4.67	0.270	0.540	
	mg/dl	162	141	183	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.19	3.65	4.73	0.270	0.540	
Cholinesterase	U/l	5216	4173	6259	522	1043	Colorimetric - Butyrylthiocholine
Creatinine	mg/dl	1.36	1.09	1.63	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.37	1.10	1.64	0.135	0.270	Jaffe rate blanked comp. (-33umol/l)
	µmol/l	121	96.8	145	12.0	24.0	
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.11	5.19	7.03	0.460	0.920	
HDL - Cholesterol	mg/dl	45.9	39.0	52.8	3.45	6.90	Direct HDL, Immunoseparation
	mmol/l	1.19	1.01	1.37	0.090	0.180	
	mg/dl	54.4	46.2	62.6	4.10	8.20	Direct HDL, PEGME
	mmol/l	1.41	1.20	1.62	0.105	0.210	
Iron	µg/dl	102	83.6	120	9.00	18.0	Colorimetric with ppt.
	µmol/l	18.3	15.0	21.6	1.65	3.30	
	µg/dl	99.5	81.6	117	8.75	17.5	Colorimetric without ppt.
	µmol/l	17.8	14.6	21.0	1.60	3.20	
LD (LDH)	U/l	201	171	231	15.0	30.0	L to P, IFCC
	U/l	426	362	490	32.0	64.0	Lactate to Pyruvate methods

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BioSystems BA 400

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
LD (LDH)	U/l	418	355	481	31.5	63.0	P to L, German methods
Lipase	U/l	44	35	53	4.50	9.00	Other Colorimetric
Phosphate Inorganic	mg/dl	5.21	4.43	5.99	0.390	0.780	Phosphomolybdate UV
	mmol/l	1.68	1.43	1.93	0.125	0.250	
Protein Total	g/dl	5.80	4.64	6.96	0.580	1.16	Biuret reaction, end point
	g/l	58.0	46.4	69.6	5.80	11.6	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GK UV. no correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	102	85.7	118	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.15	0.966	1.33	0.090	0.180	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	43.6	37.1	50.1	3.25	6.50	Urease, end point
	mg/dl (BUN)	20.3	17.3	23.3	1.50	3.00	
	mmol/l	7.26	6.17	8.35	0.545	1.09	
	mg/dl	43.8	37.2	50.4	3.30	6.60	Urease, kinetic
	mg/dl (BUN)	20.4	17.3	23.5	1.55	3.10	
	mmol/l	7.28	6.19	8.37	0.545	1.09	
Uric Acid (Urate)	mg/dl	6.17	5.37	6.97	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.367	0.319	0.415	0.024	0.048	
	mg/dl	6.25	5.44	7.06	0.405	0.810	Uricase Perox. with ascorb. ox
	mmol/l	0.372	0.324	0.420	0.024	0.048	
	mg/dl	6.24	5.43	7.05	0.405	0.810	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.371	0.323	0.419	0.024	0.048	

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BioSystems BTS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.02	3.42	4.62	0.300	0.600	Bromocresol Green
	g/l	40.2	34.2	46.2	3.00	6.00	
Alkaline Phosphatase	U/l	164	139	189	12.5	25.0	AMP optimised to IFCC
	U/l	245	208	282	18.5	37.0	Diethanolamine buffer, DEA
Calcium	mg/dl	9.26	8.33	10.2	0.470	0.940	Arsenazo III
	mmol/l	2.31	2.08	2.54	0.115	0.230	
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.03	3.51	4.55	0.260	0.520	
Creatinine	mg/dl	1.37	1.10	1.64	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	121	96.8	145	12.0	24.0	
Glucose	mg/dl	115	97.8	132	8.50	17.0	Glucose Oxidase
	mmol/l	6.39	5.43	7.35	0.480	0.960	
LD (LDH)	U/l	385	327	443	29.0	58.0	P to L Scandinavian & Dutch
Protein Total	g/dl	5.86	4.69	7.03	0.585	1.17	Biuret reaction, end point
	g/l	58.6	46.9	70.3	5.85	11.7	
Uric Acid (Urate)	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.359	0.312	0.406	0.024	0.047	
	mg/dl	5.61	4.88	6.34	0.365	0.730	Uricase Perox. with ascorb. ox
	mmol/l	0.334	0.291	0.377	0.022	0.043	

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Biotecnica Instruments Wiener BT and CB Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.95	3.36	4.54	0.295	0.590	Bromocresol Green
	g/l	39.5	33.6	45.4	2.95	5.90	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	1.87	1.48	2.26	0.195	0.390	Diazo With Sulphanilic Acid
	µmol/l	31.9	25.2	38.6	3.35	6.70	
Calcium	mg/dl	8.66	7.79	9.53	0.435	0.870	Arsenazo III
	mmol/l	2.16	1.94	2.38	0.110	0.220	
	mg/dl	8.30	7.47	9.13	0.415	0.830	Cresolphthalein Complexone
	mmol/l	2.07	1.86	2.28	0.105	0.210	
Chloride	mmol/l	101	92.9	109	4.00	8.00	Colorimetric
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.98	3.46	4.50	0.260	0.520	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Cholinesterase	U/l	5698	4558	6838	570	1140	Colorimetric - Butyrylthiocholine
CK Total	U/l	206	169	243	18.5	37.0	CK-NAC (IFCC)
	U/l	224	184	264	20.0	40.0	CK-NAC substrate start (DGKC)
Creatinine	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	Jaffe Rate Blanked
	µmol/l	129	103	155	13.0	26.0	
	mg/dl	1.50	1.20	1.80	0.150	0.300	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	133	106	160	13.5	27.0	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.06	5.15	6.97	0.455	0.910	
HDL - Cholesterol	mg/dl	50.2	42.7	57.7	3.75	7.50	Direct HDL, PPD
	mmol/l	1.30	1.11	1.49	0.095	0.190	
Iron	µg/dl	106	86.9	125	9.50	19.0	Colorimetric without ppt.
	µmol/l	18.9	15.5	22.3	1.70	3.40	
LD (LDH)	U/l	207	176	238	15.5	31.0	L to P, IFCC
	U/l	385	327	443	29.0	58.0	P to L Scandinavian & Dutch
	U/l	442	376	508	33.0	66.0	P to L, SFBC
Magnesium	mg/dl	2.27	2.00	2.54	0.135	0.270	Enzymatic
	mmol/l	0.935	0.823	1.05	0.058	0.115	
Phosphate Inorganic	mg/dl	5.08	4.32	5.84	0.380	0.760	Phosphomolybdate UV
	mmol/l	1.64	1.39	1.89	0.125	0.250	
Potassium	mmol/l	3.89	3.58	4.20	0.155	0.310	ISE method - indirect

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Biotecnica Instruments Wiener BT and CB Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Protein Total	g/dl	6.02	4.82	7.22	0.600	1.20	Biuret reaction, end point
	g/l	60.2	48.2	72.2	6.00	12.0	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/Glycerol Dehydrogenase
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	46.9	39.9	53.9	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.9	18.6	25.2	1.65	3.30	
	mmol/l	7.81	6.64	8.98	0.585	1.17	
Uric Acid (Urate)	mg/dl	5.95	5.18	6.72	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.354	0.308	0.400	0.023	0.046	
	mg/dl	5.73	4.99	6.47	0.370	0.740	Uricase Perox. with ascorb. ox
	mmol/l	0.341	0.297	0.385	0.022	0.044	
	mg/dl	5.80	5.05	6.55	0.375	0.750	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.345	0.300	0.390	0.023	0.045	

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BSI 2000/3000 Evolution

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Cholesterol	mg/dl	149	130	168	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.86	3.36	4.36	0.250	0.500	
Glucose	mg/dl	115	97.8	132	8.50	17.0	Glucose Oxidase
	mmol/l	6.38	5.42	7.34	0.480	0.960	

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RANDOX

Caretium XI-921 / XI-931

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium	mg/dl	8.74	7.87	9.61	0.435	0.870	Ion Selective Electrode
	mmol/l	2.18	1.96	2.40	0.110	0.220	
Calcium Ionised	mg/dl	4.77	4.29	5.25	0.240	0.480	Ion Selective Electrode
	mmol/l	1.19	1.07	1.31	0.060	0.120	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE Indirect

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RANDOX

Convergent Technologies ISE series
Convergys ISE Auto

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium Ionised	mg/dl	4.17	3.75	4.59	0.210	0.420	Ion Selective Electrode
	mmol/l	1.04	0.936	1.14	0.050	0.100	

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RANDOX

Cormay Accent Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.96	3.37	4.55	0.295	0.590	Bromocresol Green
	g/l	39.6	33.7	45.5	2.95	5.90	
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.05	0.830	1.27	0.110	0.220	Oxidation to Biliverdin/Vanadate
	µmol/l	18.0	14.2	21.8	1.90	3.80	
Bilirubin Total	mg/dl	1.87	1.48	2.26	0.195	0.390	Oxidation to Biliverdin/Vanadate
	µmol/l	31.9	25.2	38.6	3.35	6.70	
Calcium	mg/dl	8.66	7.79	9.53	0.435	0.870	Arsenazo III
	mmol/l	2.16	1.94	2.38	0.110	0.220	
Cholesterol	mg/dl	148	129	167	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.83	3.33	4.33	0.250	0.500	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	105	89.3	121	8.00	16.0	Glucose Oxidase
	mmol/l	5.84	4.96	6.72	0.440	0.880	
Magnesium	mg/dl	2.26	1.99	2.53	0.135	0.270	Xylidyl Blue
	mmol/l	0.932	0.820	1.04	0.054	0.108	
Protein Total	g/dl	5.89	4.71	7.07	0.590	1.18	Biuret reaction, end point
	g/l	58.9	47.1	70.7	5.90	11.8	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	46.4	39.4	53.4	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.72	6.56	8.88	0.580	1.16	
Uric Acid (Urate)	mg/dl	5.93	5.16	6.70	0.385	0.770	Uricase Perox. with ascorb. ox
	mmol/l	0.353	0.307	0.399	0.023	0.046	

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DIALAB Autolyser Autolyser

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.86	3.28	4.44	0.290	0.580	Bromocresol Green
	g/l	38.6	32.8	44.4	2.90	5.80	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Glucose	mg/dl	104	88.4	120	8.00	16.0	Glucose Oxidase
	mmol/l	5.79	4.92	6.66	0.435	0.870	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	48.0	40.8	55.2	3.60	7.20	Urease, kinetic
	mg/dl (BUN)	22.4	19.0	25.8	1.70	3.40	
	mmol/l	7.99	6.79	9.19	0.600	1.20	

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RANDOX

DiaSorin LIAISON XL

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.57	1.18	1.96	0.195	0.390	DiaSorin Liaison XL
	pg/ml	15.7	11.8	19.6	1.95	3.90	
	pmol/l	20.1	15.1	25.1	2.50	5.00	
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.79	1.43	2.15	0.180	0.360	DiaSorin Liaison XL

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DiaSys BioMajesty JCA-BM6010/C

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.94	3.35	4.53	0.295	0.590	Bromocresol Green
	g/l	39.4	33.5	45.3	2.95	5.90	
Alkaline Phosphatase	U/l	174	148	200	13.0	26.0	AMP optimised to IFCC
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.16	0.916	1.40	0.120	0.240	Diazo with Dichloroanaline
	µmol/l	19.9	15.7	24.1	2.10	4.20	
Bilirubin Total	mg/dl	1.76	1.39	2.13	0.185	0.370	Diazo With Dichloroaniline
	µmol/l	30.0	23.7	36.3	3.15	6.30	
Calcium	mg/dl	8.74	7.87	9.61	0.435	0.870	Phosphonazo
	mmol/l	2.18	1.96	2.40	0.110	0.220	
Chloride	mmol/l	99.5	91.5	108	4.25	8.50	ISE Indirect
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.03	3.51	4.55	0.260	0.520	
CK Total	U/l	203	166	240	18.5	37.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	128	102	154	13.0	26.0	
	mg/dl	1.47	1.18	1.76	0.145	0.290	Jaffe Rate Blanked
	µmol/l	130	104	156	13.0	26.0	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Hexokinase
	mmol/l	5.99	5.09	6.89	0.450	0.900	
HDL - Cholesterol	mg/dl	50.2	42.7	57.7	3.75	7.50	Direct HDL, Immunoseparation
	mmol/l	1.30	1.11	1.49	0.095	0.190	
LD (LDH)	U/l	221	188	254	16.5	33.0	L to P, IFCC
Potassium	mmol/l	3.85	3.54	4.16	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.79	4.63	6.95	0.580	1.16	Biuret reaction, end point
	g/l	57.9	46.3	69.5	5.80	11.6	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	48.8	41.5	56.1	3.65	7.30	Urease, end point
	mg/dl (BUN)	22.7	19.3	26.1	1.70	3.40	
	mmol/l	8.12	6.90	9.34	0.610	1.22	

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DiaSys BioMajesty JCA-BM6010/C

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Urea	mg/dl	47.2	40.1	54.3	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.0	18.7	25.3	1.65	3.30	
	mmol/l	7.86	6.68	9.04	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.02	5.24	6.80	0.390	0.780	Uricase Perox. with ascorb. ox
	mmol/l	0.358	0.311	0.405	0.024	0.047	

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DiaSys Respons

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.02	3.42	4.62	0.300	0.600	Bromocresol Green
	g/l	40.2	34.2	46.2	3.00	6.00	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.19	0.940	1.44	0.125	0.250	Diazo with Dichloroanaline
	µmol/l	20.3	16.0	24.6	2.15	4.30	
Bilirubin Total	mg/dl	1.72	1.36	2.08	0.180	0.360	Dichlorophenyl Diazonium
	µmol/l	29.4	23.2	35.6	3.10	6.20	
Calcium	mg/dl	8.22	7.40	9.04	0.410	0.820	Phosphonazo
	mmol/l	2.05	1.85	2.25	0.100	0.200	
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	128	102	154	13.0	26.0	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Dehydrogenase
	mmol/l	5.97	5.07	6.87	0.450	0.900	
	mg/dl	108	91.8	124	8.00	16.0	Glucose Oxidase
	mmol/l	6.02	5.12	6.92	0.450	0.900	
HDL - Cholesterol	mg/dl	48.3	41.1	55.5	3.60	7.20	Direct HDL, Immunoseparation
	mmol/l	1.25	1.06	1.44	0.095	0.190	
Iron	µg/dl	108	88.6	127	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.4	15.9	22.9	1.75	3.50	
LD (LDH)	U/l	210	179	241	15.5	31.0	L to P, IFCC
Lipase	U/l	31	25	37	3.00	6.00	Other Colorimetric
Protein Total	g/dl	5.75	4.60	6.90	0.575	1.15	Biuret reaction, end point
	g/l	57.5	46.0	69.0	5.75	11.5	
Triglycerides	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP No Correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
Urea	mg/dl	50.2	42.7	57.7	3.75	7.50	Urease, kinetic
	mg/dl (BUN)	23.4	19.9	26.9	1.75	3.50	
	mmol/l	8.35	7.10	9.60	0.625	1.25	
Uric Acid (Urate)	mg/dl	5.73	4.99	6.47	0.370	0.740	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.341	0.297	0.385	0.022	0.044	

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Diatron Pictus 400

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Glucose	mg/dl	112	95.2	129	8.50	17.0	Glucose Oxidase
	mmol/l	6.24	5.30	7.18	0.470	0.940	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	44.0	37.4	50.6	3.30	6.60	Urease, kinetic
	mg/dl (BUN)	20.5	17.4	23.6	1.55	3.10	
	mmol/l	7.32	6.22	8.42	0.550	1.10	
Uric Acid (Urate)	mg/dl	6.15	5.35	6.95	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.366	0.318	0.414	0.024	0.048	

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RANDOX

Diatron Pictus 500

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.91	3.32	4.50	0.295	0.590	Bromocresol Green
	g/l	39.1	33.2	45.0	2.95	5.90	
Alkaline Phosphatase	U/l	172	146	198	13.0	26.0	AMP optimised to IFCC
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	1.80	1.42	2.18	0.190	0.380	Dichlorophenyl Diazonium
	µmol/l	30.7	24.3	37.1	3.20	6.40	
Calcium	mg/dl	8.30	7.47	9.13	0.415	0.830	Arsenazo III
	mmol/l	2.07	1.86	2.28	0.105	0.210	
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.04	3.51	4.57	0.265	0.530	
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.35	5.40	7.30	0.475	0.950	
Protein Total	g/dl	5.59	4.47	6.71	0.560	1.12	Biuret reaction, end point
	g/l	55.9	44.7	67.1	5.60	11.2	
Triglycerides	mg/dl	102	85.7	118	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
Urea	mg/dl	46.9	39.9	53.9	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.9	18.6	25.2	1.65	3.30	
	mmol/l	7.81	6.64	8.98	0.585	1.17	
Uric Acid (Urate)	mg/dl	5.97	5.19	6.75	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.355	0.309	0.401	0.023	0.046	

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RANDOX

Diatron Pictus 700

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.84	3.26	4.42	0.290	0.580	Bromocresol Green
	g/l	38.4	32.6	44.2	2.90	5.80	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.15	5.23	7.07	0.460	0.920	
Triglycerides	mg/dl	102	85.7	118	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
Urea	mg/dl	46.8	39.8	53.8	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.79	6.62	8.96	0.585	1.17	
Uric Acid (Urate)	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.359	0.312	0.406	0.024	0.047	

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RANDOX

Diestro 103 Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.17	3.75	4.59	0.210	0.420	Ion Selective Electrode
	mmol/l	1.04	0.936	1.14	0.050	0.100	

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RANDOX

DIRUI CS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Green
	g/l	39.7	33.7	45.7	3.00	6.00	
Alkaline Phosphatase	U/l	195	166	224	14.5	29.0	AMP optimised to IFCC
ALT (GPT)	U/l	43	34	52	4.50	9.00	Colorimetric
	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	56	48	64	4.00	8.00	Immunoinhibition, EPS substrate
AST (GOT)	U/l	36	29	43	3.50	7.00	Colorimetric
	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	13.2	10.5	15.9	1.35	2.70	Enzymatic
Bilirubin Direct	mg/dl	1.03	0.814	1.25	0.110	0.220	Diazo with Dichloroanaline
	µmol/l	17.6	13.9	21.3	1.85	3.70	
Bilirubin Total	mg/dl	1.65	1.30	2.00	0.175	0.350	Diazo With Dichloroaniline
	µmol/l	28.2	22.3	34.1	2.95	5.90	
	mg/dl	1.86	1.47	2.25	0.195	0.390	Diazo With Sulphanilic Acid
	µmol/l	31.8	25.1	38.5	3.35	6.70	
	mg/dl	1.68	1.33	2.03	0.175	0.350	Dichlorophenyl Diazonium
	µmol/l	28.8	22.8	34.8	3.00	6.00	
	mg/dl	1.96	1.55	2.37	0.205	0.410	Oxidation to Biliverdin/Vanadate
	µmol/l	33.5	26.5	40.5	3.50	7.00	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.66	7.79	9.53	0.435	0.870	Cresolphthalein Complexone
	mmol/l	2.16	1.94	2.38	0.110	0.220	
Chloride	mmol/l	99.4	91.4	107	3.80	7.60	ISE Indirect
Cholesterol	mg/dl	158	137	179	10.5	21.0	Cholesterol Dehydrogenase
	mmol/l	4.10	3.57	4.63	0.265	0.530	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.96	3.45	4.47	0.255	0.510	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.98	3.46	4.50	0.260	0.520	
Creatinine	mg/dl	1.36	1.09	1.63	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline Picrate With Deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe Rate Blanked
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	126	101	151	12.5	25.0	

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RANDOX

DIRUI CS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
gamma-GT	U/l	57	48	66	4.50	9.00	DCL, gamma glut.-3-carb.-4-nitro.
	U/l	56	48	64	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-4-Nitroanilide
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.12	5.20	7.04	0.460	0.920	
	mg/dl	113	96.1	130	8.50	17.0	Hexokinase
	mmol/l	6.27	5.33	7.21	0.470	0.940	
HDL - Cholesterol	mg/dl	45.6	38.8	52.4	3.40	6.80	Direct HDL, Clearance method
	mmol/l	1.18	1.00	1.36	0.090	0.180	
Iron	µg/dl	111	91.0	131	10.0	20.0	Colorimetric with ppt.
	µmol/l	19.8	16.2	23.4	1.80	3.60	
	µg/dl	110	90.2	130	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.7	16.2	23.2	1.75	3.50	
LD (LDH)	U/l	190	162	218	14.0	28.0	L to P, IFCC
	U/l	209	178	240	15.5	31.0	Lactate to Pyruvate methods
	U/l	403	343	463	30.0	60.0	P to L, German methods
	U/l	413	351	475	31.0	62.0	P to L, SFBC
Lipase	U/l	39	31	47	4.00	8.00	Other Colorimetric
Phosphate Inorganic	mg/dl	5.08	4.32	5.84	0.380	0.760	Phosphomolybdate UV
	mmol/l	1.64	1.39	1.89	0.125	0.250	
Potassium	mmol/l	3.76	3.46	4.06	0.150	0.300	ISE method - indirect
Protein Total	g/dl	5.76	4.61	6.91	0.575	1.15	Biuret reaction, end point
	g/l	57.6	46.1	69.1	5.75	11.5	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	103	86.5	120	8.50	17.0	Lipase/GK UV. no correction
	mmol/l	1.16	0.974	1.35	0.095	0.190	
	mg/dl	88.5	74.3	103	7.25	14.5	Lipase/Glycerol Dehydrogenase
	mmol/l	1.00	0.840	1.16	0.080	0.160	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
	mg/dl	103	86.5	120	8.50	17.0	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.16	0.974	1.35	0.095	0.190	
Urea	mg/dl	45.9	39.0	52.8	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.64	6.49	8.79	0.575	1.15	
Uric Acid (Urate)	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.361	0.314	0.408	0.024	0.047	

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RANDOX

DIRUI CS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mg/dl	5.98	5.20	6.76	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.356	0.310	0.402	0.023	0.046	

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RANDOX

EBA 200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Glucose	mg/dl	112	95.2	129	8.50	17.0	Glucose Oxidase
	mmol/l	6.22	5.29	7.15	0.465	0.930	
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	

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RANDOX

Edif Instruments Sphera

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.78	3.21	4.35	0.285	0.570	Bromocresol Green
	g/l	37.8	32.1	43.5	2.85	5.70	
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	1.76	1.39	2.13	0.185	0.370	Diazo With Sulphanilic Acid
	µmol/l	30.0	23.7	36.3	3.15	6.30	
Calcium	mg/dl	8.38	7.54	9.22	0.420	0.840	Arsenazo III
	mmol/l	2.09	1.88	2.30	0.105	0.210	
Cholesterol	mg/dl	160	139	181	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.14	3.60	4.68	0.270	0.540	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.12	5.20	7.04	0.460	0.920	
Protein Total	g/dl	5.98	4.78	7.18	0.600	1.20	Biuret reaction, end point
	g/l	59.8	47.8	71.8	6.00	12.0	
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
Urea	mg/dl	45.5	38.7	52.3	3.40	6.80	Urease, kinetic
	mg/dl (BUN)	21.2	18.0	24.4	1.60	3.20	
	mmol/l	7.57	6.43	8.71	0.570	1.14	

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EGY Chem Bioelab Automated Chemistry Analysers

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.01	3.41	4.61	0.300	0.600	Bromocresol Green
	g/l	40.1	34.1	46.1	3.00	6.00	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	2.08	1.64	2.52	0.220	0.440	Diazo With Sulphanilic Acid
	µmol/l	35.6	28.1	43.1	3.75	7.50	
	mg/dl	1.88	1.49	2.27	0.195	0.390	Oxidation to Biliverdin/Vanadate
	µmol/l	32.1	25.4	38.8	3.35	6.70	
Calcium	mg/dl	8.82	7.94	9.70	0.440	0.880	Arsenazo III
	mmol/l	2.20	1.98	2.42	0.110	0.220	
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.97	3.45	4.49	0.260	0.520	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	4.00	3.48	4.52	0.260	0.520	
CK Total	U/l	183	150	216	16.5	33.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.46	1.17	1.75	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	129	103	155	13.0	26.0	
	mg/dl	1.37	1.10	1.64	0.135	0.270	Jaffe Rate Blanked
	µmol/l	121	96.8	145	12.0	24.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	56	48	64	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	113	96.1	130	8.50	17.0	Glucose Oxidase
	mmol/l	6.29	5.35	7.23	0.470	0.940	
Iron	µg/dl	105	86.1	124	9.50	19.0	Colorimetric without ppt.
	µmol/l	18.7	15.3	22.1	1.70	3.40	
Phosphate Inorganic	mg/dl	5.42	4.61	6.23	0.405	0.810	Phosphomolybdate UV
	mmol/l	1.75	1.49	2.01	0.130	0.260	
Protein Total	g/dl	5.65	4.52	6.78	0.565	1.13	Biuret reaction, end point
	g/l	56.5	45.2	67.8	5.65	11.3	
Triglycerides	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/Glycerol Dehydrogenase
	mmol/l	1.11	0.932	1.29	0.090	0.180	
	mg/dl	104	87.4	121	8.50	17.0	Lipase/GPO-PAP No Correction
	mmol/l	1.17	0.983	1.36	0.095	0.190	
Urea	mg/dl	46.8	39.8	53.8	3.50	7.00	Urease, end point
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.78	6.61	8.95	0.585	1.17	

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EGY Chem Bioelab Automated Chemistry Analysers

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Urea	mg/dl	47.5	40.4	54.6	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.1	18.8	25.4	1.65	3.30	
	mmol/l	7.90	6.72	9.08	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.69	5.82	7.56	0.435	0.870	Uricase perox. no ascorb. ox.
	mmol/l	0.398	0.346	0.450	0.026	0.052	
	mg/dl	6.34	5.52	7.16	0.410	0.820	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.377	0.328	0.426	0.025	0.049	

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ELITech Microlab 300

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
CK Total	U/l	205	168	242	18.5	37.0	CK-NAC (IFCC)
Glucose	mg/dl	103	87.6	118	7.50	15.0	Glucose Oxidase
	mmol/l	5.73	4.87	6.59	0.430	0.860	
Protein Total	g/dl	5.77	4.62	6.92	0.575	1.15	Biuret reaction, end point
	g/l	57.7	46.2	69.2	5.75	11.5	

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ELITech Selectra Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.99	3.39	4.59	0.300	0.600	Bromocresol Green
	g/l	39.9	33.9	45.9	3.00	6.00	
Alkaline Phosphatase	U/l	187	159	215	14.0	28.0	AMP optimised to IFCC
	U/l	267	227	307	20.0	40.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Calcium	mg/dl	8.46	7.61	9.31	0.425	0.850	Arsenazo III
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.99	3.47	4.51	0.260	0.520	
	mg/dl	152	132	172	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.93	3.42	4.44	0.255	0.510	
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	126	101	151	12.5	25.0	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.09	5.18	7.00	0.455	0.910	
HDL - Cholesterol	mg/dl	47.1	40.0	54.2	3.55	7.10	Direct HDL, PEGME
	mmol/l	1.22	1.04	1.40	0.090	0.180	
	mg/dl	47.9	40.7	55.1	3.60	7.20	Direct HDL, PPD
	mmol/l	1.24	1.05	1.43	0.095	0.190	
Iron	µg/dl	107	87.7	126	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.1	15.7	22.5	1.70	3.40	
LD (LDH)	U/l	197	167	227	15.0	30.0	L to P, IFCC
Lipase	U/l	29	23	35	3.00	6.00	Other Colorimetric
Phosphate Inorganic	mg/dl	5.21	4.43	5.99	0.390	0.780	Phosphomolybdate UV
	mmol/l	1.68	1.43	1.93	0.125	0.250	
Protein Total	g/dl	5.62	4.50	6.74	0.560	1.12	Biuret reaction, end point
	g/l	56.2	45.0	67.4	5.60	11.2	
Triglycerides	mg/dl	102	85.7	118	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	46.9	39.9	53.9	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.9	18.6	25.2	1.65	3.30	
	mmol/l	7.81	6.64	8.98	0.585	1.17	
Uric Acid (Urate)	mg/dl	6.30	5.48	7.12	0.410	0.820	Uricase perox. no ascorb. ox.
	mmol/l	0.375	0.326	0.424	0.025	0.049	

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ELITech Selectra Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mg/dl	5.90	5.13	6.67	0.385	0.770	Uricase Perox. with ascorb. ox
	mmol/l	0.351	0.305	0.397	0.023	0.046	

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Erba Chem EC-5/EC-7

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.04	3.43	4.65	0.305	0.610	Bromocresol Green
	g/l	40.4	34.3	46.5	3.05	6.10	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Calcium	mg/dl	9.06	8.15	9.97	0.455	0.910	Arsenazo III
	mmol/l	2.26	2.03	2.49	0.115	0.230	
Cholesterol	mg/dl	155	135	175	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.02	3.50	4.54	0.260	0.520	
Creatinine	mg/dl	1.39	1.11	1.67	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	Jaffe Rate Blanked
	µmol/l	125	100	150	12.5	25.0	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.31	5.36	7.26	0.475	0.950	
Protein Total	g/dl	5.81	4.65	6.97	0.580	1.16	Agappe Ultra Stik
	g/l	58.1	46.5	69.7	5.80	11.6	
	g/dl	5.97	4.78	7.16	0.595	1.19	Biuret reaction, end point
	g/l	59.7	47.8	71.6	5.95	11.9	
Urea	mg/dl	45.3	38.5	52.1	3.40	6.80	Urease, kinetic
	mg/dl (BUN)	21.1	17.9	24.3	1.60	3.20	
	mmol/l	7.53	6.40	8.66	0.565	1.13	
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.35	5.52	7.18	0.415	0.830	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.378	0.329	0.427	0.025	0.049	

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RANDOX

Erba EM Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.99	3.39	4.59	0.300	0.600	Bromocresol Green
	g/l	39.9	33.9	45.9	3.00	6.00	
Alkaline Phosphatase	U/l	202	172	232	15.0	30.0	AMP optimised to IFCC
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	69	59	79	5.00	10.0	Human CNPG3 (IFCC)
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	0.983	0.777	1.19	0.104	0.207	Diazo With Sulphanilic Acid
	µmol/l	16.8	13.3	20.3	1.75	3.50	
Bilirubin Total	mg/dl	1.80	1.42	2.18	0.190	0.380	Diazo With Sulphanilic Acid
	µmol/l	30.7	24.3	37.1	3.20	6.40	
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Cholesterol	mg/dl	149	130	168	9.50	19.0	Cholesterol Dehydrogenase
	mmol/l	3.87	3.37	4.37	0.250	0.500	
	mg/dl	148	129	167	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.83	3.33	4.33	0.250	0.500	
	mg/dl	151	131	171	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.92	3.41	4.43	0.255	0.510	
Creatinine	mg/dl	1.38	1.10	1.66	0.140	0.280	Jaffe Rate Blanked
	µmol/l	122	97.6	146	12.0	24.0	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	58	49	67	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	116	98.6	133	8.50	17.0	Glucose Dehydrogenase
	mmol/l	6.42	5.46	7.38	0.480	0.960	
	mg/dl	115	97.8	132	8.50	17.0	Glucose Oxidase
	mmol/l	6.38	5.42	7.34	0.480	0.960	
HDL - Cholesterol	mg/dl	51.0	43.4	58.6	3.80	7.60	Direct HDL, Clearance method
	mmol/l	1.32	1.12	1.52	0.100	0.200	
	mg/dl	52.9	45.0	60.8	3.95	7.90	Direct HDL, Immunoseparation
	mmol/l	1.37	1.16	1.58	0.105	0.210	
	mg/dl	49.8	42.3	57.3	3.75	7.50	Direct HDL, PEGME
	mmol/l	1.29	1.10	1.48	0.095	0.190	
LD (LDH)	U/l	397	337	457	30.0	60.0	P to L, German methods
Magnesium	mg/dl	2.65	2.33	2.97	0.160	0.320	Xylidyl Blue
	mmol/l	1.09	0.959	1.22	0.065	0.130	
Phosphate Inorganic	mg/dl	5.30	4.51	6.09	0.395	0.790	Phosphomolybdate UV
	mmol/l	1.71	1.45	1.97	0.130	0.260	

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Erba EM Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Protein Total	g/dl	5.66	4.53	6.79	0.565	1.13	Biuret reaction, end point
	g/l	56.6	45.3	67.9	5.65	11.3	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GK UV. no correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/Glycerol Dehydrogenase
	mmol/l	1.09	0.916	1.26	0.085	0.170	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	45.4	38.6	52.2	3.40	6.80	Urease, end point
	mg/dl (BUN)	21.1	17.9	24.3	1.60	3.20	
	mmol/l	7.55	6.42	8.68	0.565	1.13	
	mg/dl	46.5	39.5	53.5	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.73	6.57	8.89	0.580	1.16	
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	5.80	5.05	6.55	0.375	0.750	Uricase Perox. with ascorb. ox
	mmol/l	0.345	0.300	0.390	0.023	0.045	
	mg/dl	6.32	5.50	7.14	0.410	0.820	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.376	0.327	0.425	0.025	0.049	

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Erba Lyte ISE Electrolyte series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium	mg/dl	9.70	8.73	10.7	0.500	1.00	Ion Selective Electrode
	mmol/l	2.42	2.18	2.66	0.120	0.240	
Calcium Ionised	mg/dl	5.05	4.55	5.55	0.250	0.500	Ion Selective Electrode
	mmol/l	1.26	1.13	1.39	0.065	0.130	
Chloride	mmol/l	102	93.8	110	4.00	8.00	ISE Indirect
Potassium	mmol/l	3.74	3.44	4.04	0.150	0.300	ISE method - indirect
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect

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Erba XL Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.94	3.35	4.53	0.295	0.590	Bromocresol Green
	g/l	39.4	33.5	45.3	2.95	5.90	
Alkaline Phosphatase	U/l	198	168	228	15.0	30.0	AMP non-optimised
	U/l	200	170	230	15.0	30.0	AMP optimised to IFCC
ALT (GPT)	U/l	38	30	46	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Beckman Mod. IFCC Ref. without P5P
	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	0.995	0.786	1.20	0.103	0.205	Diazo With Sulphanilic Acid
	µmol/l	17.0	13.4	20.6	1.80	3.60	
	mg/dl	1.01	0.798	1.22	0.105	0.210	Dichlorophenyl Diazonium
	µmol/l	17.3	13.7	20.9	1.80	3.60	
Bilirubin Total	mg/dl	1.83	1.45	2.21	0.190	0.380	Diazo With Dichloroaniline
	µmol/l	31.3	24.7	37.9	3.30	6.60	
	mg/dl	1.87	1.48	2.26	0.195	0.390	Diazo With Sulphanilic Acid
	µmol/l	32.0	25.3	38.7	3.35	6.70	
	mg/dl	1.80	1.42	2.18	0.190	0.380	Dichlorophenyl Diazonium
	µmol/l	30.7	24.3	37.1	3.20	6.40	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.50	7.65	9.35	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.12	1.91	2.33	0.105	0.210	
	mg/dl	7.54	6.79	8.29	0.375	0.750	NM-BAPTA
	mmol/l	1.88	1.69	2.07	0.095	0.190	
Cholesterol	mg/dl	157	137	177	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	4.06	3.53	4.59	0.265	0.530	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.99	3.47	4.51	0.260	0.520	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.96	3.45	4.47	0.255	0.510	
CK Total	U/l	202	166	238	18.0	36.0	CK-NAC (IFCC)
	U/l	216	177	255	19.5	39.0	CK-NAC serum start (DGKC)
Creatinine	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Alkaline Picrate With Deproteinisation
	µmol/l	131	105	157	13.0	26.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	Jaffe Rate Blanked
	µmol/l	129	103	155	13.0	26.0	

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Erba XL Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	Jaffe rate comp. (-18umol/l)
	µmol/l	128	102	154	13.0	26.0	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
Glucose	mg/dl	113	96.1	130	8.50	17.0	Glucose Dehydrogenase
	mmol/l	6.29	5.35	7.23	0.470	0.940	
	mg/dl	113	96.1	130	8.50	17.0	Glucose Oxidase
	mmol/l	6.27	5.33	7.21	0.470	0.940	
	mg/dl	114	96.9	131	8.50	17.0	Hexokinase
	mmol/l	6.33	5.38	7.28	0.475	0.950	
HDL - Cholesterol	mg/dl	42.5	36.1	48.9	3.20	6.40	Direct HDL, PEGME
	mmol/l	1.10	0.935	1.27	0.085	0.170	
	mg/dl	44.0	37.4	50.6	3.30	6.60	Direct HDL, Roche 4th gen.
	mmol/l	1.14	0.969	1.31	0.085	0.170	
LD (LDH)	U/l	401	341	461	30.0	60.0	P to L, German methods
Phosphate Inorganic	mg/dl	5.18	4.40	5.96	0.390	0.780	Phosphomolybdate UV
	mmol/l	1.67	1.42	1.92	0.125	0.250	
Protein Total	g/dl	5.71	4.57	6.85	0.570	1.14	Biuret reaction, end point
	g/l	57.1	45.7	68.5	5.70	11.4	
	g/dl	5.59	4.47	6.71	0.560	1.12	Biuret reaction, kinetic
	g/l	55.9	44.7	67.1	5.60	11.2	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GK UV. no correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
Urea	mg/dl	46.1	39.2	53.0	3.45	6.90	Urease, end point
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.67	6.52	8.82	0.575	1.15	
	mg/dl	46.3	39.4	53.2	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.70	6.55	8.85	0.575	1.15	

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Erba XL Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	6.35	5.52	7.18	0.415	0.830	Uricase perox. no ascorb. ox.
	mmol/l	0.378	0.329	0.427	0.025	0.049	
	mg/dl	6.34	5.52	7.16	0.410	0.820	Uricase Perox. with ascorb. ox
	mmol/l	0.377	0.328	0.426	0.025	0.049	
	mg/dl	6.24	5.43	7.05	0.405	0.810	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.371	0.323	0.419	0.024	0.048	

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Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium Ionised	mg/dl	3.62	3.26	3.98	0.180	0.360	Ion Selective Electrode
	mmol/l	0.902	0.812	0.992	0.045	0.090	

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Fiske Micro Osmometer 210

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/Kg	313	250	376	31.5	63.0	Freezing Point Depression

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Fortress Diagnostics Electalyte-500

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium	mg/dl	8.42	7.58	9.26	0.420	0.840	Ion Selective Electrode
	mmol/l	2.10	1.89	2.31	0.105	0.210	
Calcium Ionised	mg/dl	4.37	3.93	4.81	0.220	0.440	Ion Selective Electrode
	mmol/l	1.09	0.981	1.20	0.055	0.110	

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Fortress Diagnostics Monarch

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.95	3.36	4.54	0.295	0.590	Bromocresol Green
	g/l	39.5	33.6	45.4	2.95	5.90	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.14	0.901	1.38	0.120	0.240	Diazo with Dichloroanaline
	µmol/l	19.5	15.4	23.6	2.05	4.10	
	mg/dl	1.12	0.885	1.36	0.120	0.240	Diazo With Sulphanilic Acid
	µmol/l	19.2	15.2	23.2	2.00	4.00	
Bilirubin Total	mg/dl	1.87	1.48	2.26	0.195	0.390	Diazo With Dichloroaniline
	µmol/l	32.0	25.3	38.7	3.35	6.70	
	mg/dl	1.80	1.42	2.18	0.190	0.380	Diazo With Sulphanilic Acid
	µmol/l	30.8	24.3	37.3	3.25	6.50	
	mg/dl	1.75	1.38	2.12	0.185	0.370	Dichlorophenyl Diazonium
	µmol/l	29.9	23.6	36.2	3.15	6.30	
	mg/dl	1.81	1.43	2.19	0.190	0.380	Oxidation to Biliverdin/Vanadate
	µmol/l	30.9	24.4	37.4	3.25	6.50	
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.03	3.51	4.55	0.260	0.520	
	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	4.05	3.52	4.58	0.265	0.530	
Creatinine	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe Rate Blanked
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.50	1.20	1.80	0.150	0.300	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	133	106	160	13.5	27.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.17	5.24	7.10	0.465	0.930	
HDL - Cholesterol	mg/dl	47.1	40.0	54.2	3.55	7.10	Direct HDL, PEGME
	mmol/l	1.22	1.04	1.40	0.090	0.180	
Protein Total	g/dl	5.71	4.57	6.85	0.570	1.14	Biuret reaction, end point
	g/l	57.1	45.7	68.5	5.70	11.4	
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/GK UV. no correction
	mmol/l	1.18	0.991	1.37	0.095	0.190	

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Fortress Diagnostics Monarch

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
Urea	mg/dl	46.2	39.3	53.1	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.68	6.53	8.83	0.575	1.15	
Uric Acid (Urate)	mg/dl	5.95	5.18	6.72	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.354	0.308	0.400	0.023	0.046	
	mg/dl	5.90	5.13	6.67	0.385	0.770	Uricase Perox. with ascorb. ox
	mmol/l	0.351	0.305	0.397	0.023	0.046	
	mg/dl	5.92	5.15	6.69	0.385	0.770	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.352	0.306	0.398	0.023	0.046	

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Fuji DRI-CHEM Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.67	3.97	5.37	0.350	0.700	Bromocresol Green
	g/l	46.7	39.7	53.7	3.50	7.00	
Alkaline Phosphatase	U/l	153	130	176	11.5	23.0	Fuji Dri-Chem JSCC
Chloride	mmol/l	98.8	90.9	107	4.10	8.20	ISE Indirect
Glucose	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.04	5.13	6.95	0.455	0.910	
LD (LDH)	U/l	181	154	208	13.5	27.0	Lactate to Pyruvate methods
Potassium	mmol/l	3.73	3.43	4.03	0.150	0.300	ISE method - indirect
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect

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Furuno CA Instruments

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.96	3.37	4.55	0.295	0.590	Bromocresol Green
	g/l	39.6	33.7	45.5	2.95	5.90	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	1.80	1.42	2.18	0.190	0.380	Oxidation to Biliverdin/Vanadate
	µmol/l	30.7	24.3	37.1	3.20	6.40	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
Cholesterol	mg/dl	157	137	177	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.07	3.54	4.60	0.265	0.530	
Creatinine	mg/dl	1.46	1.17	1.75	0.145	0.290	Jaffe Rate Blanked
	µmol/l	129	103	155	13.0	26.0	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Oxidase
	mmol/l	6.00	5.10	6.90	0.450	0.900	
	mg/dl	109	92.7	125	8.00	16.0	Hexokinase
	mmol/l	6.05	5.14	6.96	0.455	0.910	
Protein Total	g/dl	5.68	4.54	6.82	0.570	1.14	Biuret reaction, end point
	g/l	56.8	45.4	68.2	5.70	11.4	
Triglycerides	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP No Correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
Urea	mg/dl	46.2	39.3	53.1	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.69	6.54	8.84	0.575	1.15	
Uric Acid (Urate)	mg/dl	6.05	5.26	6.84	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.360	0.313	0.407	0.024	0.047	
	mg/dl	5.95	5.18	6.72	0.385	0.770	Uricase Perox. with ascorb. ox
	mmol/l	0.354	0.308	0.400	0.023	0.046	

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Gesan Chem 200/300/400

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.05	3.52	4.58	0.265	0.530	
Glucose	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.07	5.16	6.98	0.455	0.910	
Protein Total	g/dl	5.91	4.73	7.09	0.590	1.18	Biuret reaction, end point
	g/l	59.1	47.3	70.9	5.90	11.8	
Urea	mg/dl	47.6	40.5	54.7	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.92	6.73	9.11	0.595	1.19	
Uric Acid (Urate)	mg/dl	6.97	6.06	7.88	0.455	0.910	Uricase Perox. with ascorb. ox
	mmol/l	0.415	0.361	0.469	0.027	0.054	

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RANDOX

Gonotec Osmomat 3000 Basic

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/Kg	309	247	371	31.0	62.0	Freezing Point Depression

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Hitachi High-Tech Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.96	3.37	4.55	0.295	0.590	Bromocresol Green
	g/l	39.6	33.7	45.5	2.95	5.90	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Colorimetric
	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	80	68	92	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.18	0.932	1.43	0.125	0.250	Diazo with Dichloroanaline
	µmol/l	20.1	15.9	24.3	2.10	4.20	
Bilirubin Total	mg/dl	1.63	1.29	1.97	0.170	0.340	Diazo With Dichloroaniline
	µmol/l	27.9	22.0	33.8	2.95	5.90	
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Chloride	mmol/l	99.8	91.8	108	4.10	8.20	Colorimetric
	mmol/l	95.8	88.1	104	4.10	8.20	ISE Indirect
Cholesterol	mg/dl	152	132	172	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	3.93	3.42	4.44	0.255	0.510	
	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.05	3.52	4.58	0.265	0.530	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Cholinesterase	U/l	5092	4074	6110	509	1018	Colorimetric - Butyrylthiocholine
CK Total	U/l	199	163	235	18.0	36.0	CK-NAC (IFCC)
	U/l	206	169	243	18.5	37.0	CK-NAC substrate start (DGKC)
Creatinine	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline Picrate With Deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	129	103	155	13.0	26.0	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.12	5.20	7.04	0.460	0.920	
HDL - Cholesterol	mg/dl	50.6	43.0	58.2	3.80	7.60	Direct HDL, Immunoseparation
	mmol/l	1.31	1.11	1.51	0.100	0.200	
Iron	µg/dl	108	88.6	127	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.3	15.8	22.8	1.75	3.50	
LD (LDH)	U/l	215	183	247	16.0	32.0	L to P, IFCC
	U/l	401	341	461	30.0	60.0	P to L, German methods

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RANDOX

Hitachi High-Tech Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Magnesium	mg/dl	2.41	2.12	2.70	0.145	0.290	Xylidyl Blue
	mmol/l	0.991	0.872	1.11	0.060	0.119	
Phosphate Inorganic	mg/dl	5.18	4.40	5.96	0.390	0.780	Phosphomolybdate UV
	mmol/l	1.67	1.42	1.92	0.125	0.250	
Potassium	mmol/l	3.89	3.58	4.20	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.75	4.60	6.90	0.575	1.15	Biuret reaction, end point
	g/l	57.5	46.0	69.0	5.75	11.5	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µg/dl	259	205	313	27.0	54.0	Direct Colorimetric
	µmol/l	46.4	36.7	56.1	4.85	9.70	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	45.9	39.0	52.8	3.45	6.90	Urease, end point
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.64	6.49	8.79	0.575	1.15	
	mg/dl	45.2	38.4	52.0	3.40	6.80	Urease, kinetic
	mg/dl (BUN)	21.1	17.9	24.3	1.60	3.20	
	mmol/l	7.52	6.39	8.65	0.565	1.13	
Uric Acid (Urate)	mg/dl	5.93	5.16	6.70	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.353	0.307	0.399	0.023	0.046	
	mg/dl	6.10	5.31	6.89	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.363	0.316	0.410	0.024	0.047	
	mg/dl	5.92	5.15	6.69	0.385	0.770	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.352	0.306	0.398	0.023	0.046	

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RANDOX

Horiba ABX Pentra C200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Cholesterol	mg/dl	151	131	171	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.90	3.39	4.41	0.255	0.510	
Creatinine	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	127	102	152	12.5	25.0	
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Oxidase
	mmol/l	5.99	5.09	6.89	0.450	0.900	
Triglycerides	mg/dl	95.6	80.3	111	7.70	15.4	Lipase/GPO-PAP No Correction
	mmol/l	1.08	0.907	1.25	0.085	0.170	
Urea	mg/dl	43.4	36.9	49.9	3.25	6.50	Urease, kinetic
	mg/dl (BUN)	20.2	17.2	23.2	1.50	3.00	
	mmol/l	7.23	6.15	8.31	0.540	1.08	
Uric Acid (Urate)	mg/dl	6.29	5.47	7.11	0.410	0.820	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.374	0.325	0.423	0.025	0.049	

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RANDOX

Horiba ABX Pentra c400

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.92	3.33	4.51	0.295	0.590	Bromocresol Green
	g/l	39.2	33.3	45.1	2.95	5.90	
Alkaline Phosphatase	U/l	186	158	214	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.28	1.01	1.55	0.135	0.270	Diazo with Dichloroanaline
	µmol/l	21.8	17.2	26.4	2.30	4.60	
Bilirubin Total	mg/dl	1.85	1.46	2.24	0.195	0.390	Diazo With Dichloroaniline
	µmol/l	31.6	25.0	38.2	3.30	6.60	
Calcium	mg/dl	8.78	7.90	9.66	0.440	0.880	Arsenazo III
	mmol/l	2.19	1.97	2.41	0.110	0.220	
Cholesterol	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.11	3.58	4.64	0.265	0.530	
CK Total	U/l	201	165	237	18.0	36.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.41	1.13	1.69	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	125	100	150	12.5	25.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	115	97.8	132	8.50	17.0	Glucose Oxidase
	mmol/l	6.41	5.45	7.37	0.480	0.960	
	mg/dl	118	100	136	9.00	18.0	Hexokinase
	mmol/l	6.53	5.55	7.51	0.490	0.980	
HDL - Cholesterol	mg/dl	51.7	43.9	59.5	3.90	7.80	Direct HDL, PPD
	mmol/l	1.34	1.14	1.54	0.100	0.200	
	mg/dl	53.7	45.6	61.8	4.05	8.10	HDL Ultra/Accel Selective Detergent
	mmol/l	1.39	1.18	1.60	0.105	0.210	
Iron	µg/dl	110	90.2	130	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.7	16.2	23.2	1.75	3.50	
LD (LDH)	U/l	201	171	231	15.0	30.0	L to P, IFCC
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric
Magnesium	mg/dl	2.41	2.12	2.70	0.145	0.290	Xylidyl Blue
	mmol/l	0.990	0.871	1.11	0.060	0.120	
Phosphate Inorganic	mg/dl	5.73	4.87	6.59	0.430	0.860	Phosphomolybdate UV
	mmol/l	1.85	1.57	2.13	0.140	0.280	
Protein Total	g/dl	5.79	4.63	6.95	0.580	1.16	Biuret reaction, end point
	g/l	57.9	46.3	69.5	5.80	11.6	
Triglycerides	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	

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RANDOX

Horiba ABX Pentra c400

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Urea	mg/dl	44.7	38.0	51.4	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	20.8	17.7	23.9	1.55	3.10	
	mmol/l	7.43	6.32	8.54	0.555	1.11	
Uric Acid (Urate)	mg/dl	6.00	5.22	6.78	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.357	0.311	0.403	0.023	0.046	
	mg/dl	5.92	5.15	6.69	0.385	0.770	Uricase Perox. with ascorb. ox
	mmol/l	0.352	0.306	0.398	0.023	0.046	
	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.359	0.312	0.406	0.024	0.047	

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RANDOX

HTI BioChem FC Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Cholesterol	mg/dl	161	140	182	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.16	3.62	4.70	0.270	0.540	
Protein Total	g/dl	6.45	5.16	7.74	0.645	1.29	Biuret reaction, end point
	g/l	64.5	51.6	77.4	6.45	12.9	
Urea	mg/dl	49.6	42.2	57.0	3.70	7.40	Urease, kinetic
	mg/dl (BUN)	23.1	19.6	26.6	1.75	3.50	
	mmol/l	8.26	7.02	9.50	0.620	1.24	

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RANDOX

Human Diagnostics Humalyzer Primus 2000/3000/3500

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.31	5.36	7.26	0.475	0.950	
Urea	mg/dl	47.5	40.4	54.6	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.1	18.8	25.4	1.65	3.30	
	mmol/l	7.90	6.72	9.08	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.54	5.69	7.39	0.425	0.850	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.389	0.338	0.440	0.026	0.051	

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Human Diagnostics HumaStar 100/200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.00	3.40	4.60	0.300	0.600	Bromocresol Green
	g/l	40.0	34.0	46.0	3.00	6.00	
Alkaline Phosphatase	U/l	174	148	200	13.0	26.0	AMP optimised to IFCC
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
Calcium	mg/dl	8.18	7.36	9.00	0.410	0.820	Cresolphthalein Complexone
	mmol/l	2.04	1.84	2.24	0.100	0.200	
Cholesterol	mg/dl	146	127	165	9.50	19.0	Cholesterol Dehydrogenase
	mmol/l	3.77	3.28	4.26	0.245	0.490	
Creatinine	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe Rate Blanked
	µmol/l	124	99.2	149	12.5	25.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.12	5.20	7.04	0.460	0.920	
HDL - Cholesterol	mg/dl	42.5	36.1	48.9	3.20	6.40	Direct HDL, Immunoseparation
	mmol/l	1.10	0.935	1.27	0.085	0.170	
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
Urea	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.75	6.59	8.91	0.580	1.16	
Uric Acid (Urate)	mg/dl	6.77	5.89	7.65	0.440	0.880	Uricase perox. no ascorb. ox.
	mmol/l	0.403	0.351	0.455	0.026	0.052	
	mg/dl	6.52	5.67	7.37	0.425	0.850	Uricase Perox. with ascorb. ox
	mmol/l	0.388	0.338	0.438	0.025	0.050	
	mg/dl	6.32	5.50	7.14	0.410	0.820	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.376	0.327	0.425	0.025	0.049	

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Human Diagnostics HumaStar 600

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.09	3.48	4.70	0.305	0.610	Bromocresol Green
	g/l	40.9	34.8	47.0	3.05	6.10	
Bilirubin Direct	mg/dl	1.31	1.03	1.59	0.140	0.280	Dichlorophenyl Diazonium
	µmol/l	22.4	17.7	27.1	2.35	4.70	
Bilirubin Total	mg/dl	1.77	1.40	2.14	0.185	0.370	Dichlorophenyl Diazonium
	µmol/l	30.3	23.9	36.7	3.20	6.40	
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Glucose	mg/dl	112	95.2	129	8.50	17.0	Glucose Oxidase
	mmol/l	6.21	5.28	7.14	0.465	0.930	
HDL - Cholesterol	mg/dl	45.2	38.4	52.0	3.40	6.80	Direct HDL, Immunoseparation
	mmol/l	1.17	0.995	1.35	0.090	0.180	
Protein Total	g/dl	5.74	4.59	6.89	0.575	1.15	Biuret reaction, end point
	g/l	57.4	45.9	68.9	5.75	11.5	
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/GPO-PAP No Correction
	mmol/l	1.18	0.991	1.37	0.095	0.190	
Urea	mg/dl	45.9	39.0	52.8	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.63	6.49	8.77	0.570	1.14	
Uric Acid (Urate)	mg/dl	6.05	5.26	6.84	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.360	0.313	0.407	0.024	0.047	

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i-SENS i-Smart 30

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.05	3.65	4.45	0.200	0.400	Ion Selective Electrode
	mmol/l	1.01	0.909	1.11	0.050	0.100	
Chloride	mmol/l	101	92.9	109	4.00	8.00	ISE Indirect

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IL ab 600 / 650 / Aries / Taurus

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.91	3.32	4.50	0.295	0.590	Bromocresol Green
	g/l	39.1	33.2	45.0	2.95	5.90	
Alkaline Phosphatase	U/l	194	165	223	14.5	29.0	AMP optimised to IFCC
	U/l	196	167	225	14.5	29.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Amylase Total	U/l	75	64	86	5.50	11.0	I.L. 2-chloro-pNPG3
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	0.819	0.647	0.991	0.086	0.172	Diazo With Sulphanilic Acid
	µmol/l	14.0	11.1	16.9	1.45	2.90	
Bilirubin Total	mg/dl	1.93	1.52	2.34	0.205	0.410	Diazo With Sulphanilic Acid
	µmol/l	33.0	26.1	39.9	3.45	6.90	
	mg/dl	1.83	1.45	2.21	0.190	0.380	Dichlorophenyl Diazonium
	µmol/l	31.2	24.6	37.8	3.30	6.60	
Calcium	mg/dl	8.38	7.54	9.22	0.420	0.840	Arsenazo III
	mmol/l	2.09	1.88	2.30	0.105	0.210	
	mg/dl	8.22	7.40	9.04	0.410	0.820	Cresolphthalein Complexone
	mmol/l	2.05	1.85	2.25	0.100	0.200	
Chloride	mmol/l	96.4	88.7	104	3.80	7.60	ISE Indirect
Cholesterol	mg/dl	151	131	171	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.90	3.39	4.41	0.255	0.510	
Cholinesterase	U/l	5628	4502	6754	563	1126	Colorimetric - Butyrylthiocholine
CK Total	U/l	202	166	238	18.0	36.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.39	1.11	1.67	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Jaffe Rate Blanked
	µmol/l	131	105	157	13.0	26.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.11	5.19	7.03	0.460	0.920	
HDL - Cholesterol	mg/dl	40.9	34.8	47.0	3.05	6.10	Direct HDL, Clearance method
	mmol/l	1.06	0.901	1.22	0.080	0.160	
	mg/dl	40.9	34.8	47.0	3.05	6.10	Direct HDL, Immunoseparation
	mmol/l	1.06	0.901	1.22	0.080	0.160	
Iron	µg/dl	108	88.6	127	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.4	15.9	22.9	1.75	3.50	
LD (LDH)	U/l	372	316	428	28.0	56.0	P to L, German methods
Lipase	U/l	35	28	42	3.50	7.00	Other Colorimetric

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RANDOX

IL ab 600 / 650 / Aries / Taurus

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Magnesium	mg/dl	2.33	2.05	2.61	0.140	0.280	Enzymatic
	mmol/l	0.958	0.843	1.07	0.056	0.112	
	mg/dl	2.38	2.09	2.67	0.145	0.290	Xylidyl Blue
	mmol/l	0.981	0.863	1.10	0.060	0.119	
Phosphate Inorganic	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate UV
	mmol/l	1.62	1.38	1.86	0.120	0.240	
Potassium	mmol/l	3.89	3.58	4.20	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.61	4.49	6.73	0.560	1.12	Biuret reaction, end point
	g/l	56.1	44.9	67.3	5.60	11.2	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
Urea	mg/dl	47.2	40.1	54.3	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.0	18.7	25.3	1.65	3.30	
	mmol/l	7.86	6.68	9.04	0.590	1.18	
Uric Acid (Urate)	mg/dl	5.95	5.18	6.72	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.354	0.308	0.400	0.023	0.046	
	mg/dl	5.70	4.96	6.44	0.370	0.740	Uricase Perox. with ascorb. ox
	mmol/l	0.339	0.295	0.383	0.022	0.044	

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IL Gem Premier 3000 / 3500

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.01	3.61	4.41	0.200	0.400	Ion Selective Electrode
	mmol/l	1.00	0.900	1.10	0.050	0.100	

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RANDOX

IL yte

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.17	3.75	4.59	0.210	0.420	Ion Selective Electrode
	mmol/l	1.04	0.936	1.14	0.050	0.100	

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ISE srl Miura I.S.E. srl Miura

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.75	3.19	4.31	0.280	0.560	Bromocresol Green
	g/l	37.5	31.9	43.1	2.80	5.60	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	2.01	1.59	2.43	0.210	0.420	Diazo With Sulphanilic Acid
	µmol/l	34.4	27.2	41.6	3.60	7.20	
Calcium	mg/dl	8.74	7.87	9.61	0.435	0.870	Arsenazo III
	mmol/l	2.18	1.96	2.40	0.110	0.220	
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Creatinine	mg/dl	1.31	1.05	1.57	0.130	0.260	Jaffe Rate Blanked
	µmol/l	116	92.8	139	11.5	23.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	107	91.0	123	8.00	16.0	Glucose Oxidase
	mmol/l	5.94	5.05	6.83	0.445	0.890	
Protein Total	g/dl	5.77	4.62	6.92	0.575	1.15	Biuret reaction, end point
	g/l	57.7	46.2	69.2	5.75	11.5	
Triglycerides	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	46.2	39.3	53.1	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.68	6.53	8.83	0.575	1.15	
Uric Acid (Urate)	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.361	0.314	0.408	0.024	0.047	

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Labomed Inc. FACA

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Cholesterol	mg/dl	155	135	175	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.02	3.50	4.54	0.260	0.520	
Creatinine	mg/dl	1.41	1.13	1.69	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	125	100	150	12.5	25.0	
Glucose	mg/dl	113	96.1	130	8.50	17.0	Glucose Oxidase
	mmol/l	6.25	5.31	7.19	0.470	0.940	
Protein Total	g/dl	5.88	4.70	7.06	0.590	1.18	Biuret reaction, end point
	g/l	58.8	47.0	70.6	5.90	11.8	
Urea	mg/dl	46.8	39.8	53.8	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.78	6.61	8.95	0.585	1.17	
Uric Acid (Urate)	mg/dl	5.88	5.12	6.64	0.380	0.760	Uricase perox. no ascorb. ox.
	mmol/l	0.350	0.305	0.395	0.023	0.045	

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RANDOX

Linear Chemicals Linear KROMA

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Cholesterol	mg/dl	152	132	172	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.93	3.42	4.44	0.255	0.510	
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.12	5.20	7.04	0.460	0.920	

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RANDOX

Medica Easy Mediquip ML-200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.00	3.60	4.40	0.200	0.400	Ion Selective Electrode
	mmol/l	0.997	0.897	1.10	0.052	0.103	

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Medica Easylyte Instruments

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.13	3.72	4.54	0.205	0.410	Ion Selective Electrode
	mmol/l	1.03	0.927	1.13	0.050	0.100	
Chloride	mmol/l	101	92.9	109	4.00	8.00	ISE Indirect
Lithium	mg/dl	0.673	0.592	0.754	0.041	0.081	Ion Selective Electrode
	mmol/l	0.969	0.853	1.09	0.061	0.121	
Potassium	mmol/l	3.76	3.46	4.06	0.150	0.300	ISE method - indirect
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect

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Medsource Ozone Csense 100/200CD

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Green
	g/l	39.7	33.7	45.7	3.00	6.00	
Calcium	mg/dl	8.18	7.36	9.00	0.410	0.820	Arsenazo III
	mmol/l	2.04	1.84	2.24	0.100	0.200	
Glucose	mg/dl	112	95.2	129	8.50	17.0	Glucose Oxidase
	mmol/l	6.24	5.30	7.18	0.470	0.940	
Protein Total	g/dl	5.58	4.46	6.70	0.560	1.12	Biuret reaction, end point
	g/l	55.8	44.6	67.0	5.60	11.2	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Acid Phosphatase (Total)	U/l	15	10	20	2.50	5.00	Naphthyl phos. sub., kinetic
Albumin	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Green
	g/l	39.7	33.7	45.7	3.00	6.00	
	g/dl	4.02	3.42	4.62	0.300	0.600	Bromocresol Purple
	g/l	40.2	34.2	46.2	3.00	6.00	
	g/dl	3.88	3.30	4.46	0.290	0.580	Nephelometric Assays
	g/l	38.8	33.0	44.6	2.90	5.80	
	g/dl	3.93	3.34	4.52	0.295	0.590	Ortho Vitros Microslide Systems
	g/l	39.3	33.4	45.2	2.95	5.90	
	g/dl	4.02	3.42	4.62	0.300	0.600	Turbidimetric Assays
	g/l	40.2	34.2	46.2	3.00	6.00	
Alkaline Phosphatase	U/l	193	164	222	14.5	29.0	AMP non-optimised
	U/l	193	164	222	14.5	29.0	AMP optimised to IFCC
	U/l	174	148	200	13.0	26.0	Ortho Vitros Microslide Systems
	U/l	193	164	222	14.5	29.0	Other AMP kits
alpha - HBDH	U/l	208	164	252	22.0	44.0	Oxobutyrate < 10 mmol/l
ALT (GPT)	U/l	40	32	48	4.00	8.00	Colorimetric
	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems
	U/l	46	37	55	4.50	9.00	Ortho Vitros MicroSlide visible
	U/l	42	34	50	4.00	8.00	Tris Buffer With P5P
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P, NVKC
	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
	U/l	39	31	47	4.00	8.00	Tris buffer, SCE
Amylase Pancreatic	U/l	56	48	64	4.00	8.00	Immunoinhibition, EPS substrate
	U/l	61	52	70	4.50	9.00	Randox Liquid Stable pNPG7
	U/l	56	48	64	4.00	8.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	81	69	93	6.00	12.0	Abbott Alinity Amylase 2
	U/l	82	70	94	6.00	12.0	Abbott Architect Amylase 2
	U/l	81	69	93	6.00	12.0	Abbott Architect/Alinity cal factor 3431
	U/l	82	70	94	6.00	12.0	Abbott Architect/Alinity cal factor 3806
	U/l	81	69	93	6.00	12.0	Abbott blocked pNPG7
	U/l	77	65	89	6.00	12.0	Agappe - CNPG3
	U/l	82	70	94	6.00	12.0	Beckman blocked pNPG7
	U/l	75	64	86	5.50	11.0	Beckman CNPG3 (Extinction Coeff)
	U/l	74	63	85	5.50	11.0	Beckman CNPG3 (Master Cal)
	U/l	79	67	91	6.00	12.0	Beckman maltotetraose
	U/l	85	72	98	6.50	13.0	Beckman Synchron AMY7
	U/l	84	71	97	6.50	13.0	bioMerieux 2-chloro-pNPG3

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Amylase Total	U/l	79	67	91	6.00	12.0	BM/Roche, Colorimetric pNPG7
	U/l	78	66	90	6.00	12.0	Human CNPG3 (IFCC)
	U/l	77	65	89	6.00	12.0	I.L. 2-chloro-pNPG3
	U/l	63	54	72	4.50	9.00	Ortho Vitros Microslide Systems
	U/l	79	67	91	6.00	12.0	Other Roche 2-chloro-pNPG7
	U/l	83	71	95	6.00	12.0	pNP Maltotrioside substrates
	U/l	85	72	98	6.50	13.0	Randox Liquid Ethylidene pNPG7
	U/l	86	73	99	6.50	13.0	Randox Lyo. Ethylidene pNPG7
	U/l	80	68	92	6.00	12.0	Roche Integra 2-chloro-pNPG7
	U/l	80	68	92	6.00	12.0	Roche Liquid Stable pNPG7
	U/l	88	75	101	6.50	13.0	Siemens - blocked pNPG7
	U/l	83	71	95	6.00	12.0	Siemens/Dade Behring 2-chloro-pNPG3
Apolipoprotein A1	g/l	1.14	0.935	1.35	0.105	0.210	Immunoturbidimetric
	mg/dl	114	93.5	135	10.5	21.0	
Apolipoprotein B	g/l	0.691	0.567	0.815	0.062	0.124	Immunoturbidimetric
	mg/dl	69.1	56.7	81.5	6.20	12.4	
AST (GOT)	U/l	37	30	44	3.50	7.00	Colorimetric
	U/l	53	42	64	5.50	11.0	Ortho Vitros MicroSlide visible
	U/l	37	30	44	3.50	7.00	Phosphate buffer, DGKC
	U/l	45	36	54	4.50	9.00	Tris Buffer With P5P
	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
	U/l	36	29	43	3.50	7.00	Tris buffer, SCE
Bicarbonate	mmol/l	13.2	10.5	15.9	1.35	2.70	Manometric
Bile Acids	µmol/l	24.1	19.3	28.9	2.40	4.80	4th Generation Colorimetric
	µmol/l	25.7	20.6	30.8	2.55	5.10	5th Generation Colorimetric
Bilirubin Direct	mg/dl	0.989	0.781	1.20	0.106	0.211	Modified Jendrassik
	µmol/l	16.9	13.4	20.4	1.75	3.50	
	mg/dl	0.801	0.633	0.969	0.084	0.168	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	13.7	10.8	16.6	1.45	2.90	
	mg/dl	1.16	0.916	1.40	0.120	0.240	Diazo/Sulphanilic Beckman DxC
	µmol/l	19.8	15.6	24.0	2.10	4.20	
	mg/dl	1.16	0.916	1.40	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.9	15.7	24.1	2.10	4.20	
Bilirubin Total	mg/dl	2.02	1.60	2.44	0.210	0.420	Modified Jendrassik
	µmol/l	34.6	27.3	41.9	3.65	7.30	
	mg/dl	1.76	1.39	2.13	0.185	0.370	Diazo With Dichloroaniline
	µmol/l	30.0	23.7	36.3	3.15	6.30	
	mg/dl	1.85	1.46	2.24	0.195	0.390	Diazo With Sulphanilic Acid
	µmol/l	31.6	25.0	38.2	3.30	6.60	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Bilirubin Total	mg/dl	1.68	1.33	2.03	0.175	0.350	Diazonium Ion
	µmol/l	28.8	22.8	34.8	3.00	6.00	
	mg/dl	1.74	1.37	2.11	0.185	0.370	Dichlorophenyl Diazonium
	µmol/l	29.8	23.5	36.1	3.15	6.30	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Nitrobenzenediazonium Salt
	µmol/l	29.0	22.9	35.1	3.05	6.10	
	mg/dl	1.87	1.48	2.26	0.195	0.390	Ortho Vitros MicroSlide Total Bil
	µmol/l	32.0	25.3	38.7	3.35	6.70	
	mg/dl	1.92	1.52	2.32	0.200	0.400	Oxidation to Biliverdin/Vanadate
	µmol/l	32.9	26.0	39.8	3.45	6.90	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.38	7.54	9.22	0.420	0.840	Cresolphthalein Complexone
	mmol/l	2.09	1.88	2.30	0.105	0.210	
	mg/dl	8.66	7.79	9.53	0.435	0.870	Ion Selective Electrode
	mmol/l	2.16	1.94	2.38	0.110	0.220	
	mg/dl	8.58	7.72	9.44	0.430	0.860	Methylthymol Blue
	mmol/l	2.14	1.93	2.35	0.105	0.210	
	mg/dl	8.50	7.65	9.35	0.425	0.850	NM-BAPTA
	mmol/l	2.12	1.91	2.33	0.105	0.210	
	mg/dl	8.42	7.58	9.26	0.420	0.840	Ortho Vitros Microslide Systems
	mmol/l	2.10	1.89	2.31	0.105	0.210	
	mg/dl	8.46	7.61	9.31	0.425	0.850	Phosphonazo
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Calcium Ionised	mg/dl	4.17	3.75	4.59	0.210	0.420	Ion Selective Electrode
	mmol/l	1.04	0.936	1.14	0.050	0.100	
	mg/dl	4.33	3.90	4.76	0.215	0.430	Spectrophotometric
	mmol/l	1.08	0.972	1.19	0.055	0.110	
Chloride	mmol/l	100	92.0	108	4.00	8.00	Colorimetric
	mmol/l	99.1	91.2	107	3.95	7.90	ISE Direct
	mmol/l	98.1	90.3	106	3.95	7.90	ISE Indirect
	mmol/l	101	92.9	109	4.00	8.00	Ortho Vitros Microslide Systems
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	3.95	3.44	4.46	0.255	0.510	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.97	3.45	4.49	0.260	0.520	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.95	3.44	4.46	0.255	0.510	
Cholinesterase	U/l	5620	4496	6744	562	1124	Colorimetric - Benzoylcholine

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Cholinesterase	U/l	5834	4667	7001	584	1167	Colorimetric - Butyrylthiocholine
	U/l	10106	8085	12127	1011	2021	Colorimetric - Butyrythiochol. Dimension
	U/l	5538	4430	6646	554	1108	Ortho Vitros Microslide Systems
CK Total	U/l	199	163	235	18.0	36.0	CK-NAC (IFCC)
	U/l	205	168	242	18.5	37.0	CK-NAC serum start (DGKC)
	U/l	206	169	243	18.5	37.0	CK-NAC substrate start (DGKC)
	U/l	197	162	232	17.5	35.0	Creatine Phosphate Substrate Start
	U/l	185	152	218	16.5	33.0	Dithioerythritol (DTE), IFCC correlated
	U/l	219	180	258	19.5	39.0	Monothioglycerol
Copper	µg/dl	106	84.8	127	10.5	21.0	Colorimetric
	µmol/l	16.6	13.3	19.9	1.65	3.30	
Cortisol	nmol/l	474	356	592	59.0	118	Roche Cobas e402/e801
	µg/dl	17.1	12.8	21.4	2.15	4.30	
Creatinine	mg/dl	1.41	1.13	1.69	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	Alkaline Picrate With Deproteinisation
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.37	1.10	1.64	0.135	0.270	IDMS Traceable
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	Jaffe Rate Blanked
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.36	1.09	1.63	0.135	0.270	Jaffe rate blanked comp. (-33umol/l)
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.39	1.11	1.67	0.140	0.280	Jaffe rate comp. (-18umol/l)
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	Roche Creatinine Plus
	µmol/l	129	103	155	13.0	26.0	
	mg/dl	1.36	1.09	1.63	0.135	0.270	Vitros, DT60/DT60 II/DTSC II
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.34	1.07	1.61	0.135	0.270	Vitros, IDMS traceable
	µmol/l	119	95.2	143	12.0	24.0	
D-3-Hydroxybutyrate	mmol/l	0.300	0.255	0.345	0.023	0.045	Tris buffer 100mmol pH 8.5
Digoxin	ng/ml	1.23	0.984	1.48	0.125	0.250	Immunoturbidimetric
	nmol/l	1.57	1.26	1.88	0.155	0.310	
Folate	ng/ml	8.56	6.51	10.6	1.02	2.04	Roche Cobas e402/e801
	nmol/l	19.4	14.7	24.1	2.35	4.70	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Free T4	ng/dl	1.30	0.975	1.63	0.165	0.330	Abbott Architect
	pg/ml	13.0	9.75	16.3	1.65	3.30	
	pmol/l	16.7	12.5	20.9	2.10	4.20	
	ng/dl	1.65	1.24	2.06	0.205	0.410	Autobio CLIA
	pg/ml	16.5	12.4	20.6	2.05	4.10	
	pmol/l	21.2	15.9	26.5	2.65	5.30	
	ng/dl	1.42	1.07	1.77	0.175	0.350	Beckman Access/LXi725
	pg/ml	14.2	10.7	17.7	1.75	3.50	
	pmol/l	18.2	13.7	22.7	2.25	4.50	
	ng/dl	1.37	1.03	1.71	0.170	0.340	Beckman Dxl 600/800
	pg/ml	13.7	10.3	17.1	1.70	3.40	
	pmol/l	17.6	13.2	22.0	2.20	4.40	
	ng/dl	1.51	1.13	1.89	0.190	0.380	bioMerieux, VIDAS-FT4N Kit
	pg/ml	15.1	11.3	18.9	1.90	3.80	
	pmol/l	19.4	14.6	24.2	2.40	4.80	
	ng/dl	2.52	1.89	3.15	0.315	0.630	Ortho Vitros 3600/5600/ECi/XT/7600
	pg/ml	25.2	18.9	31.5	3.15	6.30	
	pmol/l	32.3	24.2	40.4	4.05	8.10	
	ng/dl	1.67	1.25	2.09	0.210	0.420	Roche Cobas 4000/e411
	pg/ml	16.7	12.5	20.9	2.10	4.20	
	pmol/l	21.4	16.1	26.7	2.65	5.30	
	ng/dl	1.73	1.30	2.16	0.215	0.430	Roche Cobas e402/e801
	pg/ml	17.3	13.0	21.6	2.15	4.30	
	pmol/l	22.2	16.7	27.7	2.75	5.50	
	ng/dl	1.66	1.25	2.07	0.205	0.410	Roche Cobas e601/ 602
	pg/ml	16.6	12.5	20.7	2.05	4.10	
	pmol/l	21.3	16.0	26.6	2.65	5.30	
	ng/dl	1.43	1.07	1.79	0.180	0.360	Siemens Centaur
	pg/ml	14.3	10.7	17.9	1.80	3.60	
	pmol/l	18.3	13.7	22.9	2.30	4.60	
	ng/dl	1.43	1.07	1.79	0.180	0.360	Siemens Dimension Exl LOCI
	pg/ml	14.3	10.7	17.9	1.80	3.60	
	pmol/l	18.3	13.7	22.9	2.30	4.60	
	ng/dl	1.47	1.10	1.84	0.185	0.370	Siemens/DPC Immulite 1000
	pg/ml	14.7	11.0	18.4	1.85	3.70	
	pmol/l	18.8	14.1	23.5	2.35	4.70	
	ng/dl	1.61	1.21	2.01	0.200	0.400	Siemens/DPC Immulite 2000/2500
	pg/ml	16.1	12.1	20.1	2.00	4.00	
	pmol/l	20.7	15.5	25.9	2.60	5.20	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
gamma-GT	U/l	58	49	67	4.50	9.00	DCL, gamma glut.-3-carb.-4-nitro.
	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
	U/l	68	58	78	5.00	10.0	Ortho Vitros Microslide Systems
Gentamicin	µg/ml	3.40	2.72	4.08	0.340	0.680	Gravimetric
	µmol/l	7.11	5.69	8.53	0.710	1.42	
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer
Glucose	mg/dl	111	94.4	128	8.50	17.0	Agappe - GOD-PAP
	mmol/l	6.14	5.22	7.06	0.460	0.920	
	mg/dl	110	93.5	127	8.50	17.0	Glucose Dehydrogenase
	mmol/l	6.12	5.20	7.04	0.460	0.920	
	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.13	5.21	7.05	0.460	0.920	
	mg/dl	109	92.7	125	8.00	16.0	GOD/02-Beckman method
	mmol/l	6.03	5.13	6.93	0.450	0.900	
	mg/dl	108	91.8	124	8.00	16.0	Hexokinase
	mmol/l	6.02	5.12	6.92	0.450	0.900	
	mg/dl	109	92.7	125	8.00	16.0	Ortho Vitros Microslide Systems
	mmol/l	6.04	5.13	6.95	0.455	0.910	
HDL - Cholesterol	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL, Immunoseparation
	mmol/l	1.21	1.03	1.39	0.090	0.180	
	mg/dl	47.9	40.7	55.1	3.60	7.20	Direct HDL, PEGME
	mmol/l	1.24	1.05	1.43	0.095	0.190	
	mg/dl	48.6	41.3	55.9	3.65	7.30	Direct HDL, PPD
	mmol/l	1.26	1.07	1.45	0.095	0.190	
	mg/dl	51.0	43.4	58.6	3.80	7.60	HDL Ultra/Accel Selective Detergent
	mmol/l	1.32	1.12	1.52	0.100	0.200	
	mg/dl	51.0	43.4	58.6	3.80	7.60	Vitros 5.1 FS Microtip assay
	mmol/l	1.32	1.12	1.52	0.100	0.200	
	mg/dl	50.2	42.7	57.7	3.75	7.50	Vitros dHDL, PTA/MgCl2 direct precip.
	mmol/l	1.30	1.11	1.49	0.095	0.190	
	mg/dl	51.0	43.4	58.6	3.80	7.60	Vitros, Magnetic HDL
	mmol/l	1.32	1.12	1.52	0.100	0.200	
Immunoglobulin A	g/l	1.94	1.46	2.42	0.240	0.480	Turbidimetric (IFCC Cal.)
	mg/dl	194	146	242	24.0	48.0	
Immunoglobulin G	g/l	7.08	5.81	8.35	0.635	1.27	Turbidimetric (IFCC Cal.)
	mg/dl	708	581	835	63.5	127	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Immunoglobulin M	g/l	0.839	0.671	1.01	0.086	0.171	Turbidimetric (IFCC Cal.)
	mg/dl	83.9	67.1	101	8.55	17.1	
Iron	µg/dl	113	92.7	133	10.0	20.0	Abbott Alinity Iron 2
	µmol/l	20.3	16.6	24.0	1.85	3.70	
	µg/dl	113	92.7	133	10.0	20.0	Abbott Architect Chemilum
	µmol/l	20.2	16.6	23.8	1.80	3.60	
	µg/dl	120	98.4	142	11.0	22.0	Agappe - CHROMAZUROL
	µmol/l	21.4	17.5	25.3	1.95	3.90	
	µg/dl	107	87.7	126	9.50	19.0	Colorimetric with ppt.
	µmol/l	19.2	15.7	22.7	1.75	3.50	
	µg/dl	108	88.6	127	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.3	15.8	22.8	1.75	3.50	
	µg/dl	112	91.8	132	10.0	20.0	Optical Emission Spectroscopy
	µmol/l	20.1	16.5	23.7	1.80	3.60	
	µg/dl	113	92.7	133	10.0	20.0	Ortho Vitros Microslide Systems
	µmol/l	20.3	16.6	24.0	1.85	3.70	
Lactate	mg/dl	12.3	10.1	14.5	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.37	1.12	1.62	0.125	0.250	
	mg/dl	12.3	10.1	14.5	1.10	2.20	Enzymatic Electrode
	mmol/l	1.36	1.12	1.60	0.120	0.240	
	mg/dl	12.3	10.1	14.5	1.10	2.20	Ion Selective Electrode
	mmol/l	1.36	1.12	1.60	0.120	0.240	
	mg/dl	11.6	9.51	13.7	1.05	2.10	Ortho Vitros Microslide Systems
	mmol/l	1.29	1.06	1.52	0.115	0.230	
	mg/dl	11.9	9.76	14.0	1.05	2.10	UV-LDH
	mmol/l	1.32	1.08	1.56	0.120	0.240	
LD (LDH)	U/l	179	152	206	13.5	27.0	L to P Beckman (Extinction Coeff)
	U/l	197	167	227	15.0	30.0	L to P Siemens/Dade, non-IFCC
	U/l	199	169	229	15.0	30.0	L to P, IFCC
	U/l	198	168	228	15.0	30.0	Lactate to Pyruvate methods
	U/l	224	190	258	17.0	34.0	Ortho Vitros IFCC Traceable
	U/l	224	190	258	17.0	34.0	Ortho Vitros Microslide Systems
	U/l	408	347	469	30.5	61.0	P to L Scandinavian & Dutch
	U/l	397	337	457	30.0	60.0	P to L, German methods
	U/l	402	342	462	30.0	60.0	P to L, SFBC
	U/l	196	167	225	14.5	29.0	Pyruvate 1.4 mM - Beckman LD-P
Lipase	U/l	38	30	46	4.00	8.00	Colorimetric Dimension (LIP Kit)
	U/l	36	29	43	3.50	7.00	Colorimetric Dimension (LIPL Kit)
	U/l	35	28	42	3.50	7.00	Colorimetric Roche

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Lipase	U/l	228	183	273	22.5	45.0	Ortho Vitros Microslide Systems
	U/l	35	28	42	3.50	7.00	Roche Turbidimetric with colipase
Lithium	mg/dl	0.672	0.591	0.753	0.041	0.081	Ion Selective Electrode
	mmol/l	0.968	0.852	1.08	0.056	0.112	
	mg/dl	0.778	0.685	0.871	0.047	0.093	Ortho Vitros Microslide Systems
	mmol/l	1.12	0.986	1.25	0.065	0.130	
	mg/dl	0.685	0.603	0.767	0.041	0.082	Spectrophotometric
	mmol/l	0.987	0.869	1.11	0.062	0.123	
Magnesium	mg/dl	2.29	2.02	2.56	0.135	0.270	Arsenazo III
	mmol/l	0.942	0.829	1.06	0.059	0.118	
	mg/dl	2.33	2.05	2.61	0.140	0.280	Atomic Absorption
	mmol/l	0.960	0.845	1.08	0.060	0.120	
	mg/dl	2.32	2.04	2.60	0.140	0.280	Calmagite
	mmol/l	0.954	0.840	1.07	0.058	0.116	
	mg/dl	2.34	2.06	2.62	0.140	0.280	Chlorphosphonazo III
	mmol/l	0.963	0.847	1.08	0.059	0.117	
	mg/dl	2.31	2.03	2.59	0.140	0.280	Enzymatic
	mmol/l	0.950	0.836	1.06	0.055	0.110	
	mg/dl	2.31	2.03	2.59	0.140	0.280	Methylthymol Blue
	mmol/l	0.951	0.837	1.07	0.060	0.119	
	mg/dl	2.31	2.03	2.59	0.140	0.280	Ortho Vitros Microslide Systems
	mmol/l	0.951	0.837	1.07	0.060	0.119	
	mg/dl	2.32	2.04	2.60	0.140	0.280	Xylidyl Blue
	mmol/l	0.956	0.841	1.07	0.057	0.114	
NEFA	mmol/l	1.27	1.02	1.52	0.125	0.250	Colorimetric
Osmolality	mOsm/Kg	290	232	348	29.0	58.0	Calculated
	mOsm/Kg	310	248	372	31.0	62.0	Freezing Point Depression
Paracetamol (Acetamin)	mg/l	13.6	10.9	16.3	1.35	2.70	Gravimetric
	mmol/l	0.090	0.072	0.108	0.009	0.018	
Phosphate Inorganic	mg/dl	5.15	4.38	5.92	0.385	0.770	Ortho Vitros Microslide Systems
	mmol/l	1.66	1.41	1.91	0.125	0.250	
	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate Enzymatic
	mmol/l	1.62	1.38	1.86	0.120	0.240	
	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate UV
	mmol/l	1.62	1.38	1.86	0.120	0.240	
Potassium	mmol/l	3.79	3.49	4.09	0.150	0.300	Colorimetric
	mmol/l	3.88	3.57	4.19	0.155	0.310	Enzymatic

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Potassium	mmol/l	3.78	3.48	4.08	0.150	0.300	ISE method - direct
	mmol/l	3.84	3.53	4.15	0.155	0.310	ISE method - indirect
	mmol/l	3.85	3.54	4.16	0.155	0.310	Ortho Vitros Microslide Systems
Protein Total	g/dl	5.63	4.50	6.76	0.565	1.13	Biuret reaction, CX4/5/7
	g/l	56.3	45.0	67.6	5.65	11.3	
	g/dl	5.70	4.56	6.84	0.570	1.14	Biuret reaction, end point
	g/l	57.0	45.6	68.4	5.70	11.4	
	g/dl	5.67	4.54	6.80	0.565	1.13	Biuret reaction, kinetic
	g/l	56.7	45.4	68.0	5.65	11.3	
	g/dl	5.77	4.62	6.92	0.575	1.15	Ortho Vitros Microslide Systems
	g/l	57.7	46.2	69.2	5.75	11.5	
PSA Total	ng/ml = µg/l	7.78	5.84	9.72	0.970	1.94	Abbott Architect/ Alinity
	ng/ml = µg/l	8.31	6.23	10.4	1.05	2.09	Autobio CLIA
	ng/ml = µg/l	11.4	8.55	14.3	1.45	2.90	Beckman Access standardised to Hybritech
	ng/ml = µg/l	11.2	8.40	14.0	1.40	2.80	Beckman DXI standardised to Hybritech
	ng/ml = µg/l	9.57	7.18	12.0	1.22	2.43	bioMerieux VIDAS TPSA
	ng/ml = µg/l	11.1	8.33	13.9	1.40	2.80	Mindray CL-Series
	ng/ml = µg/l	9.41	7.06	11.8	1.20	2.39	Ortho Vitros 3600/5600/ECi
	ng/ml = µg/l	9.41	7.06	11.8	1.20	2.39	Ortho Vitros 3600/5600/ECi PSA II/XT7600
	ng/ml = µg/l	9.92	7.44	12.4	1.24	2.48	Roche Cobas 4000/e411
	ng/ml = µg/l	9.90	7.43	12.4	1.25	2.50	Roche Cobas e402/e801
	ng/ml = µg/l	9.91	7.43	12.4	1.25	2.49	Roche Cobas e601/602
	ng/ml = µg/l	9.60	7.20	12.0	1.20	2.40	Siemens Atellica IM
	ng/ml = µg/l	9.37	7.03	11.7	1.17	2.33	Siemens Centaur
	ng/ml = µg/l	8.64	6.48	10.8	1.08	2.16	Siemens Centaur CP

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
PSA Total	ng/ml = µg/l	8.82	6.62	11.0	1.09	2.18	Siemens Dimension
	ng/ml = µg/l	8.87	6.65	11.1	1.12	2.23	Siemens Immulite 2000/2500, Total PSA
	ng/ml = µg/l	6.94	5.21	8.67	0.865	1.73	TOSOH AIA Series
Salicylate	mg/dl	5.94	4.75	7.13	0.595	1.19	Gravimetric
	mmol/l	0.430	0.344	0.516	0.043	0.086	
Sodium	mmol/l	139	132	146	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	Flame Photometry
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
Theophylline	µg/ml	5.10	4.08	6.12	0.510	1.02	Gravimetric
	µmol/l	28.3	22.6	34.0	2.85	5.70	
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.15	0.920	1.38	0.115	0.230	Abbott Architect
	µU/ml = mIU/l	1.37	1.10	1.64	0.135	0.270	Access/LXi725 Fast TSH 2nd gen.
	µU/ml = mIU/l	1.37	1.10	1.64	0.135	0.270	Access/LXi725 hyper TSH 3rd gen.
	µU/ml = mIU/l	1.72	1.38	2.06	0.170	0.340	Autobio CLIA
	µU/ml = mIU/l	1.36	1.09	1.63	0.135	0.270	Beckman DXI600/800/ Access 2 (3rd IS)
	µU/ml = mIU/l	1.56	1.25	1.87	0.155	0.310	Biomerieux VIDAS TSH
	µU/ml = mIU/l	1.77	1.42	2.12	0.175	0.350	Mindray CL 8/6/2/12/1000i Ref: TSH 11X
	µU/ml = mIU/l	1.37	1.10	1.64	0.135	0.270	Ortho Vitros TSH

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.44	1.15	1.73	0.145	0.290	Ortho Vitros TSH3
	µU/ml = mIU/l	1.69	1.35	2.03	0.170	0.340	Roche Cobas 4000/e411
	µU/ml = mIU/l	1.59	1.27	1.91	0.160	0.320	Roche Cobas e402/e801
	µU/ml = mIU/l	1.65	1.32	1.98	0.165	0.330	Roche Cobas e601/ 602
	µU/ml = mIU/l	1.64	1.31	1.97	0.165	0.330	Roche Elecsys
	µU/ml = mIU/l	1.33	1.06	1.60	0.135	0.270	Siemens Atellica IM
	µU/ml = mIU/l	1.43	1.14	1.72	0.145	0.290	Siemens Centaur
	µU/ml = mIU/l	1.36	1.09	1.63	0.135	0.270	Siemens Dimension Exl LOCI
	µU/ml = mIU/l	1.56	1.25	1.87	0.155	0.310	Siemens/DPC Immulite 1000
	µU/ml = mIU/l	1.47	1.18	1.76	0.145	0.290	Siemens/DPC Immulite 2000/2500
TIBC	µg/dl	241	190	292	25.5	51.0	Calculated from Transferrin
	µmol/l	43.1	34.0	52.2	4.55	9.10	
	µg/dl	246	194	298	26.0	52.0	Direct Colorimetric
	µmol/l	44.0	34.8	53.2	4.60	9.20	
	µg/dl	236	186	286	25.0	50.0	FE+UIBC(saturation with iron)
	µmol/l	42.3	33.4	51.2	4.45	8.90	
	µg/dl	259	205	313	27.0	54.0	Ortho Vitros Microslide Systems
	µmol/l	46.3	36.6	56.0	4.85	9.70	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
TIBC	µg/dl	258	204	312	27.0	54.0	Ortho Vitros Microtip
	µmol/l	46.2	36.5	55.9	4.85	9.70	
	µg/dl	234	185	283	24.5	49.0	Removal Of Excess Free Iron
	µmol/l	41.9	33.1	50.7	4.40	8.80	
Tobramycin	µg/ml	2.95	2.36	3.54	0.295	0.590	Gravimetric
	µmol/l	6.30	5.04	7.56	0.630	1.26	
Total T3	ng/dl	119	89.3	149	15.0	30.0	Abbott Architect
	ng/ml	1.20	0.900	1.50	0.150	0.300	
	nmol/l	1.84	1.38	2.30	0.230	0.460	
	ng/dl	125	93.8	156	15.5	31.0	bioMerieux, VIDAS
	ng/ml	1.25	0.938	1.56	0.155	0.310	
	nmol/l	1.92	1.44	2.40	0.240	0.480	
	ng/dl	121	90.8	151	15.0	30.0	Mindray CL 8/6/2/12/1000i Ref: T3 11X
	ng/ml	1.22	0.915	1.53	0.155	0.310	
	nmol/l	1.87	1.40	2.34	0.235	0.470	
	ng/dl	171	128	214	21.5	43.0	Ortho Vitros 3600/5600/ECi/XT/7600
	ng/ml	1.71	1.28	2.14	0.215	0.430	
	nmol/l	2.63	1.97	3.29	0.330	0.660	
	ng/dl	158	119	197	19.5	39.0	Roche Cobas 4000/e411
	ng/ml	1.59	1.19	1.99	0.200	0.400	
	nmol/l	2.44	1.83	3.05	0.305	0.610	
	ng/dl	170	128	212	21.0	42.0	Roche Cobas e402/e801
	ng/ml	1.71	1.28	2.14	0.215	0.430	
	nmol/l	2.62	1.97	3.27	0.325	0.650	
	ng/dl	153	115	191	19.0	38.0	Roche Cobas e601/ 602
	ng/ml	1.54	1.16	1.92	0.190	0.380	
	nmol/l	2.36	1.77	2.95	0.295	0.590	
	ng/dl	126	94.5	158	16.0	32.0	TOSOH AIA Series
	ng/ml	1.26	0.945	1.58	0.160	0.320	
	nmol/l	1.94	1.46	2.42	0.240	0.480	
Total T4	ng/ml	70.3	52.7	87.9	8.80	17.6	Abbott Architect
	nmol/l	90.1	67.6	113	11.5	22.9	
	µg/dl	7.03	5.27	8.79	0.880	1.76	
	ng/ml	77.8	58.4	97.2	9.70	19.4	Autobio CLIA
	nmol/l	99.8	74.9	125	12.6	25.2	
	µg/dl	7.78	5.84	9.72	0.970	1.94	
	ng/ml	69.3	52.0	86.6	8.65	17.3	bioMerieux, VIDAS
	nmol/l	88.8	66.6	111	11.1	22.2	
	µg/dl	6.93	5.20	8.66	0.865	1.73	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Total T4	ng/ml	67.3	50.5	84.1	8.40	16.8	Ortho Vitros 3600/5600/ECi/XT 7600
	nmol/l	86.3	64.7	108	10.9	21.7	
	µg/dl	6.73	5.05	8.41	0.840	1.68	
	ng/ml	71.7	53.8	89.6	8.95	17.9	Roche Cobas 4000/e411
	nmol/l	91.9	68.9	115	11.6	23.1	
	µg/dl	7.17	5.38	8.96	0.895	1.79	
	ng/ml	70.4	52.8	88.0	8.80	17.6	Roche Cobas e402/e801
	nmol/l	90.2	67.7	113	11.4	22.8	
	µg/dl	7.04	5.28	8.80	0.880	1.76	
	ng/ml	68.3	51.2	85.4	8.55	17.1	Roche Cobas e601/ 602
	nmol/l	87.6	65.7	110	11.2	22.4	
	µg/dl	6.83	5.12	8.54	0.855	1.71	
	ng/ml	69.3	52.0	86.6	8.65	17.3	Siemens Centaur
	nmol/l	88.8	66.6	111	11.1	22.2	
	µg/dl	6.93	5.20	8.66	0.865	1.73	
	ng/ml	78.8	59.1	98.5	9.85	19.7	Thermo Scientific / Microgenics DRI
	nmol/l	101	75.8	126	12.5	25.0	
	µg/dl	7.88	5.91	9.85	0.985	1.97	
	ng/ml	60.3	45.2	75.4	7.55	15.1	TOSOH AIA Series
	nmol/l	77.3	58.0	96.6	9.65	19.3	
	µg/dl	6.03	4.52	7.54	0.755	1.51	
Transferrin	g/l	1.94	1.55	2.33	0.195	0.390	Immunoturbidimetric
	mg/dl	194	155	233	19.5	39.0	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Abbott Architect Triglyceride 2
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GK UV. no correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GK UV., 0.11 mmol/l correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/Glycerol Dehydrogenase
	mmol/l	1.12	0.941	1.30	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
	mg/dl	119	100	138	9.50	19.0	Ortho Vitros Microslide Systems
	mmol/l	1.35	1.13	1.57	0.110	0.220	
	mg/dl	93.8	78.8	109	7.60	15.2	Quidel Triage Meter Plus
	mmol/l	1.06	0.890	1.23	0.085	0.170	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Siemens Atellica IM
	mmol/l	1.18	0.991	1.37	0.095	0.190	
Urea	mg/dl	46.3	39.4	53.2	3.45	6.90	Beckman - Conductivity
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.70	6.55	8.85	0.575	1.15	
	mg/dl	45.9	39.0	52.8	3.45	6.90	O-Phthalaldehyde
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.63	6.49	8.77	0.570	1.14	
	mg/dl	42.4	36.0	48.8	3.20	6.40	Ortho Vitros Microslide Systems
	mg/dl (BUN)	19.8	16.8	22.8	1.50	3.00	
	mmol/l	7.06	6.00	8.12	0.530	1.06	
	mg/dl	46.8	39.8	53.8	3.50	7.00	Urease - hypochlorite
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.79	6.62	8.96	0.585	1.17	
	mg/dl	46.8	39.8	53.8	3.50	7.00	Urease, end point
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.79	6.62	8.96	0.585	1.17	
	mg/dl	46.3	39.4	53.2	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.71	6.55	8.87	0.580	1.16	
Uric Acid (Urate)	mg/dl	5.85	5.09	6.61	0.380	0.760	Ortho Vitros Microslide Systems
	mmol/l	0.348	0.303	0.393	0.023	0.045	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase @ 293 nm
	mmol/l	0.362	0.315	0.409	0.024	0.047	
	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.359	0.312	0.406	0.024	0.047	
	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase Perox. with ascorb. ox
	mmol/l	0.359	0.312	0.406	0.024	0.047	
	mg/dl	5.98	5.20	6.76	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.356	0.310	0.402	0.023	0.046	
	mg/dl	6.05	5.26	6.84	0.395	0.790	Uricase, catalase 340nm.
	mmol/l	0.360	0.313	0.407	0.024	0.047	

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Method

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Vitamin B12	pg/ml	591	473	709	59.0	118	Roche Cobas e402/e801
	pmol/l	436	349	523	43.5	87.0	
Zinc	µg/dl	167	134	200	16.5	33.0	Colorimetric with deprot.
	µmol/l	25.6	20.5	30.7	2.55	5.10	

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Mindray BA 88A

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.01	3.41	4.61	0.300	0.600	Bromocresol Green
	g/l	40.1	34.1	46.1	3.00	6.00	
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	1.85	1.46	2.24	0.195	0.390	Diazo With Sulphanilic Acid
	µmol/l	31.7	25.0	38.4	3.35	6.70	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	Arsenazo III
	mmol/l	2.13	1.92	2.34	0.105	0.210	
Cholesterol	mg/dl	157	137	177	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.07	3.54	4.60	0.265	0.530	
Creatinine	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline Picrate With Deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Jaffe Rate Blanked
	µmol/l	131	105	157	13.0	26.0	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	61	52	70	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.10	5.19	7.01	0.455	0.910	
HDL - Cholesterol	mg/dl	51.0	43.4	58.6	3.80	7.60	Direct HDL, Clearance method
	mmol/l	1.32	1.12	1.52	0.100	0.200	
Protein Total	g/dl	5.72	4.58	6.86	0.570	1.14	Biuret reaction, end point
	g/l	57.2	45.8	68.6	5.70	11.4	
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.17	0.983	1.36	0.095	0.190	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	53.4	45.4	61.4	4.00	8.00	Urease, end point
	mg/dl (BUN)	24.9	21.2	28.6	1.85	3.70	
	mmol/l	8.89	7.56	10.2	0.655	1.31	
	mg/dl	46.3	39.4	53.2	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.70	6.55	8.85	0.575	1.15	
Uric Acid (Urate)	mg/dl	6.39	5.56	7.22	0.415	0.830	Uricase perox. no ascorb. ox.
	mmol/l	0.380	0.331	0.429	0.025	0.049	
	mg/dl	7.09	6.17	8.01	0.460	0.920	Uricase Perox. with ascorb. ox
	mmol/l	0.422	0.367	0.477	0.028	0.055	

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Mindray BS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.11	3.49	4.73	0.310	0.620	Agappe - Bromocresol Green
	g/l	41.1	34.9	47.3	3.10	6.20	
	g/dl	3.93	3.34	4.52	0.295	0.590	Bromocresol Green
	g/l	39.3	33.4	45.2	2.95	5.90	
	g/dl	3.95	3.36	4.54	0.295	0.590	Bromocresol Purple
	g/l	39.5	33.6	45.4	2.95	5.90	
Alkaline Phosphatase	U/l	200	170	230	15.0	30.0	AMP optimised to IFCC
	U/l	256	218	294	19.0	38.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	41	33	49	4.00	8.00	Agappe - IFCC
	U/l	41	33	49	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
	U/l	41	33	49	4.00	8.00	Colorimetric
	U/l	42	34	50	4.00	8.00	LDH - JSCC
	U/l	44	35	53	4.50	9.00	Phosphate buffer, DGKC
	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	83	71	95	6.00	12.0	Amyloclastic Methods
Amylase Total	U/l	78	66	90	6.00	12.0	Agappe - CNPG3
	U/l	84	71	97	6.50	13.0	Amyloclastic Methods
	U/l	76	65	87	5.50	11.0	Beckman CNPG3 (Master Cal)
	U/l	79	67	91	6.00	12.0	Human CNPG3 (IFCC)
	U/l	88	75	101	6.50	13.0	pNP Maltotrioside substrates
	U/l	83	71	95	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	35	28	42	3.50	7.00	Agappe - IFCC
	U/l	39	31	47	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
	U/l	39	31	47	4.00	8.00	Colorimetric
	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bilirubin Direct	mg/dl	1.11	0.877	1.34	0.115	0.230	Dichlorophenyl Diazonium
	µmol/l	18.9	14.9	22.9	2.00	4.00	
Bilirubin Total	mg/dl	1.94	1.53	2.35	0.205	0.410	Diazo With Sulphanilic Acid
	µmol/l	33.1	26.1	40.1	3.50	7.00	
	mg/dl	1.93	1.52	2.34	0.205	0.410	Diazonium Ion
	µmol/l	33.0	26.1	39.9	3.45	6.90	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Dichlorophenyl Diazonium
	µmol/l	29.0	22.9	35.1	3.05	6.10	
	mg/dl	1.77	1.40	2.14	0.185	0.370	Oxidation to Biliverdin/Vanadate
	µmol/l	30.2	23.9	36.5	3.15	6.30	
Calcium	mg/dl	8.22	7.40	9.04	0.410	0.820	Agappe - ARSENAZO
	mmol/l	2.05	1.85	2.25	0.100	0.200	

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Mindray BS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.74	7.87	9.61	0.435	0.870	Cresolphthalein Complexone
	mmol/l	2.18	1.96	2.40	0.110	0.220	
Chloride	mmol/l	98.4	90.5	106	3.80	7.60	Colorimetric
	mmol/l	100	92.0	108	4.00	8.00	ISE Indirect
Cholesterol	mg/dl	149	130	168	9.50	19.0	Agappe - CHOD-PAP
	mmol/l	3.87	3.37	4.37	0.250	0.500	
	mg/dl	152	132	172	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	3.93	3.42	4.44	0.255	0.510	
	mg/dl	152	132	172	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.93	3.42	4.44	0.255	0.510	
	mg/dl	150	131	169	9.50	19.0	Cholesterol Oxidase - IDMS
	mmol/l	3.89	3.38	4.40	0.255	0.510	
Cholinesterase	U/l	5761	4609	6913	576	1152	Colorimetric - Butyrylthiocholine
CK Total	U/l	201	165	237	18.0	36.0	Abbott CK-NAC (IFCC)
	U/l	207	170	244	18.5	37.0	CK-NAC (IFCC)
	U/l	214	175	253	19.5	39.0	CK-NAC serum start (DGKC)
	U/l	222	182	262	20.0	40.0	CK-NAC substrate start (DGKC)
	U/l	203	166	240	18.5	37.0	Creatine Phosphate Substrate Start
	U/l	217	178	256	19.5	39.0	Gel Agglutination
Copper	µg/dl	111	88.8	133	11.0	22.0	Colorimetric
	µmol/l	17.5	14.0	21.0	1.75	3.50	
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	Agappe - JAFFE'S KINETIC
	µmol/l	128	102	154	13.0	26.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Alkaline Picrate With Deproteinisation
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Jaffe Rate Blanked
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe rate comp. (-18umol/l)
	µmol/l	124	99.2	149	12.5	25.0	
gamma-GT	U/l	59	50	68	4.50	9.00	Agappe - SZASZ KINETIC
	U/l	60	51	69	4.50	9.00	Beckman Szasz (Extinction Coeff.)
	U/l	59	50	68	4.50	9.00	DCL, gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut.-3-carb.-4-nitro.

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Mindray BS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
Glucose	mg/dl	111	94.4	128	8.50	17.0	Agappe - GOD-PAP
	mmol/l	6.14	5.22	7.06	0.460	0.920	
	mg/dl	114	96.9	131	8.50	17.0	Glucose Dehydrogenase
	mmol/l	6.30	5.36	7.24	0.470	0.940	
	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.08	5.17	6.99	0.455	0.910	
	mg/dl	110	93.5	127	8.50	17.0	Hexokinase
	mmol/l	6.13	5.21	7.05	0.460	0.920	
HDL - Cholesterol	mg/dl	47.9	40.7	55.1	3.60	7.20	Agappe - SELECTIVE INHIBITION
	mmol/l	1.24	1.05	1.43	0.095	0.190	
	mg/dl	46.3	39.4	53.2	3.45	6.90	Direct HDL, Clearance method
	mmol/l	1.20	1.02	1.38	0.090	0.180	
	mg/dl	47.9	40.7	55.1	3.60	7.20	Direct HDL, Immunoseparation
	mmol/l	1.24	1.05	1.43	0.095	0.190	
	mg/dl	47.1	40.0	54.2	3.55	7.10	Direct HDL, PEGME
	mmol/l	1.22	1.04	1.40	0.090	0.180	
	mg/dl	47.9	40.7	55.1	3.60	7.20	Direct HDL, PPD
	mmol/l	1.24	1.05	1.43	0.095	0.190	
	mg/dl	44.8	38.1	51.5	3.35	6.70	Direct HDL, Roche 4th gen.
	mmol/l	1.16	0.986	1.33	0.085	0.170	
	mg/dl	48.6	41.3	55.9	3.65	7.30	HDL Ultra/Accel Selective Detergent
	mmol/l	1.26	1.07	1.45	0.095	0.190	
Iron	µg/dl	107	87.7	126	9.50	19.0	Colorimetric with ppt.
	µmol/l	19.2	15.7	22.7	1.75	3.50	
	µg/dl	107	87.7	126	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.1	15.7	22.5	1.70	3.40	
Lactate	mg/dl	12.7	10.4	15.0	1.15	2.30	Colorimetric - Lactate oxidase
	mmol/l	1.41	1.16	1.66	0.125	0.250	
LD (LDH)	U/l	199	169	229	15.0	30.0	L to P, IFCC
	U/l	193	164	222	14.5	29.0	Lactate to Pyruvate methods
	U/l	427	363	491	32.0	64.0	P to L Scandinavian & Dutch
	U/l	409	348	470	30.5	61.0	P to L, German methods
	U/l	396	337	455	29.5	59.0	P to L, SFBC
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric
Magnesium	mg/dl	2.26	1.99	2.53	0.135	0.270	Agappe - XYLIDYL BLUE
	mmol/l	0.932	0.820	1.04	0.054	0.108	

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Mindray BS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Magnesium	mg/dl	2.35	2.07	2.63	0.140	0.280	Enzymatic
	mmol/l	0.965	0.849	1.08	0.058	0.115	
	mg/dl	2.35	2.07	2.63	0.140	0.280	Methylthymol Blue
	mmol/l	0.969	0.853	1.09	0.061	0.121	
	mg/dl	2.39	2.10	2.68	0.145	0.290	Xylidyl Blue
	mmol/l	0.983	0.865	1.10	0.059	0.117	
Phosphate Inorganic	mg/dl	5.08	4.32	5.84	0.380	0.760	Agappe - PHOSPOHMOLYBDATE
	mmol/l	1.64	1.39	1.89	0.125	0.250	
	mg/dl	5.11	4.34	5.88	0.385	0.770	Phosphomolybdate Enzymatic
	mmol/l	1.65	1.40	1.90	0.125	0.250	
	mg/dl	5.08	4.32	5.84	0.380	0.760	Phosphomolybdate UV
	mmol/l	1.64	1.39	1.89	0.125	0.250	
Potassium	mmol/l	3.87	3.56	4.18	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.75	4.60	6.90	0.575	1.15	Agappe Ultra Stik
	g/l	57.5	46.0	69.0	5.75	11.5	
	g/dl	5.79	4.63	6.95	0.580	1.16	Biuret reaction, end point
	g/l	57.9	46.3	69.5	5.80	11.6	
	g/dl	5.79	4.63	6.95	0.580	1.16	Biuret reaction, kinetic
	g/l	57.9	46.3	69.5	5.80	11.6	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µg/dl	228	180	276	24.0	48.0	Direct Colorimetric
	µmol/l	40.8	32.2	49.4	4.30	8.60	
	µg/dl	229	181	277	24.0	48.0	FE+UIBC(saturation with iron)
	µmol/l	40.9	32.3	49.5	4.30	8.60	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GK UV. no correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/GK UV., 0.11 mmol/l correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/Glycerol Dehydrogenase
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
	mg/dl	93.8	78.8	109	7.60	15.2	Quidel Triage Meter Plus
	mmol/l	1.06	0.890	1.23	0.085	0.170	

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Mindray BS Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Urea	mg/dl	46.1	39.2	53.0	3.45	6.90	Agappe - BERTHELOT
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.67	6.52	8.82	0.575	1.15	
	mg/dl	47.1	40.0	54.2	3.55	7.10	Agappe Ultra Stik
	mg/dl (BUN)	21.9	18.6	25.2	1.65	3.30	
	mmol/l	7.83	6.66	9.00	0.585	1.17	
	mg/dl	45.7	38.8	52.6	3.45	6.90	Urease - hypochlorite
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
	mmol/l	7.61	6.47	8.75	0.570	1.14	
	mg/dl	47.1	40.0	54.2	3.55	7.10	Urease, end point
	mg/dl (BUN)	21.9	18.6	25.2	1.65	3.30	
	mmol/l	7.83	6.66	9.00	0.585	1.17	
	mg/dl	47.1	40.0	54.2	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.0	18.7	25.3	1.65	3.30	
	mmol/l	7.84	6.66	9.02	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.34	5.52	7.16	0.410	0.820	Agappe - URICASE - PAP
	mmol/l	0.377	0.328	0.426	0.025	0.049	
	mg/dl	6.59	5.73	7.45	0.430	0.860	Agappe - URICASE - TOPS
	mmol/l	0.392	0.341	0.443	0.026	0.051	
	mg/dl	5.97	5.19	6.75	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.355	0.309	0.401	0.023	0.046	
	mg/dl	6.00	5.22	6.78	0.390	0.780	Uricase Perox. with ascorb. ox
	mmol/l	0.357	0.311	0.403	0.023	0.046	
	mg/dl	5.98	5.20	6.76	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.356	0.310	0.402	0.023	0.046	
Zinc	µg/dl	155	124	186	15.5	31.0	Colorimetric without deprot.
	µmol/l	23.7	19.0	28.4	2.35	4.70	

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RANDOX

Mindray CL Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
PSA Total	ng/ml = µg/l	11.1	8.33	13.9	1.40	2.80	Mindray CL-Series
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.77	1.42	2.12	0.175	0.350	Mindray CL 8/6/2/12/1000i Ref: TSH 11X
Total T3	ng/dl	121	90.8	151	15.0	30.0	Mindray CL 8/6/2/12/1000i Ref: T3 11X
	ng/ml	1.22	0.915	1.53	0.155	0.310	
	nmol/l	1.87	1.40	2.34	0.235	0.470	

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RANDOX

MTI Diagnostics Auto ISE

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium	mg/dl	8.86	7.97	9.75	0.445	0.890	Ion Selective Electrode
	mmol/l	2.21	1.99	2.43	0.110	0.220	
Calcium Ionised	mg/dl	4.13	3.72	4.54	0.205	0.410	Ion Selective Electrode
	mmol/l	1.03	0.927	1.13	0.050	0.100	
Chloride	mmol/l	104	95.7	112	4.00	8.00	ISE Indirect
Potassium	mmol/l	3.67	3.38	3.96	0.145	0.290	ISE method - indirect

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RANDOX

MTI Diagnostics M Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.93	3.34	4.52	0.295	0.590	Bromocresol Green
	g/l	39.3	33.4	45.2	2.95	5.90	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	1.75	1.38	2.12	0.185	0.370	Diazo With Dichloroaniline
	µmol/l	29.9	23.6	36.2	3.15	6.30	
Calcium	mg/dl	8.78	7.90	9.66	0.440	0.880	Arsenazo III
	mmol/l	2.19	1.97	2.41	0.110	0.220	
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.98	3.46	4.50	0.260	0.520	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.96	3.45	4.47	0.255	0.510	
CK Total	U/l	208	171	245	18.5	37.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.54	1.23	1.85	0.155	0.310	Jaffe Rate Blanked
	µmol/l	136	109	163	13.5	27.0	
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	112	95.2	129	8.50	17.0	Glucose Oxidase
	mmol/l	6.22	5.29	7.15	0.465	0.930	
Protein Total	g/dl	5.75	4.60	6.90	0.575	1.15	Biuret reaction, end point
	g/l	57.5	46.0	69.0	5.75	11.5	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	47.2	40.1	54.3	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.0	18.7	25.3	1.65	3.30	
	mmol/l	7.85	6.67	9.03	0.590	1.18	
Uric Acid (Urate)	mg/dl	5.85	5.09	6.61	0.380	0.760	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.348	0.303	0.393	0.023	0.045	

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RANDOX

Ortho Clinical Diagnostics 46/56/XT 7600 (Microtip/well)

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.00	3.40	4.60	0.300	0.600	Ortho Vitros Microslide Systems
	g/l	40.0	34.0	46.0	3.00	6.00	
Alkaline Phosphatase	U/l	173	147	199	13.0	26.0	Ortho Vitros Microslide Systems
ALT (GPT)	U/l	49	39	59	5.00	10.0	Ortho Vitros Microslide Systems
	U/l	46	37	55	4.50	9.00	Ortho Vitros MicroSlide visible
Amylase Total	U/l	63	54	72	4.50	9.00	Ortho Vitros Microslide Systems
AST (GOT)	U/l	53	42	64	5.50	11.0	Ortho Vitros MicroSlide visible
Bicarbonate	mmol/l	12.0	9.52	14.5	1.25	2.50	Ortho Vitros Microslide Systems
Bilirubin Total	mg/dl	1.73	1.37	2.09	0.180	0.360	Ortho Vitros MicroSlide Total Bil
	µmol/l	29.6	23.4	35.8	3.10	6.20	
Bilirubin unconjugated BU	mg/dl	1.03	0.814	1.25	0.110	0.220	Direct Bilirubin Vitros slide
	µmol/l	17.6	13.9	21.3	1.85	3.70	
Calcium	mg/dl	8.42	7.58	9.26	0.420	0.840	Ortho Vitros Microslide Systems
	mmol/l	2.10	1.89	2.31	0.105	0.210	
Chloride	mmol/l	102	93.8	110	4.00	8.00	Ortho Vitros Microslide Systems
Cholesterol	mg/dl	153	133	173	10.0	20.0	Ortho Vitros Microslide Systems
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Cholinesterase	U/l	5652	4522	6782	565	1130	Ortho Vitros Microslide Systems
CK Total	U/l	203	166	240	18.5	37.0	Ortho Vitros Microslide Systems
Creatinine	mg/dl	1.34	1.07	1.61	0.135	0.270	Vitros, DT60/DT60 II/DTSC II
	µmol/l	119	95.2	143	12.0	24.0	
	mg/dl	1.34	1.07	1.61	0.135	0.270	Vitros, IDMS traceable
	µmol/l	119	95.2	143	12.0	24.0	
D-3-Hydroxybutyrate	mmol/l	0.303	0.258	0.348	0.023	0.045	Tris buffer 100mmol pH 8.5
Free T4	ng/dl	2.50	1.88	3.12	0.310	0.620	Ortho Vitros 3600/5600/ECi/XT/7600
	pg/ml	25.0	18.8	31.2	3.10	6.20	
	pmol/l	32.0	24.0	40.0	4.00	8.00	
gamma-GT	U/l	69	59	79	5.00	10.0	Ortho Vitros Microslide Systems
Glucose	mg/dl	109	92.7	125	8.00	16.0	Ortho Vitros Microslide Systems
	mmol/l	6.06	5.15	6.97	0.455	0.910	
HDL - Cholesterol	mg/dl	50.6	43.0	58.2	3.80	7.60	Vitros dHDL, PTA/MgCl2 direct precip.
	mmol/l	1.31	1.11	1.51	0.100	0.200	
Iron	µg/dl	114	93.5	135	10.5	21.0	Ortho Vitros Microslide Systems
	µmol/l	20.4	16.7	24.1	1.85	3.70	
LD (LDH)	U/l	227	193	261	17.0	34.0	Ortho Vitros IFCC Traceable
	U/l	220	187	253	16.5	33.0	Ortho Vitros Microslide Systems
Lipase	U/l	230	184	276	23.0	46.0	Ortho Vitros Microslide Systems

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RANDOX

Ortho Clinical Diagnostics 46/56/XT 7600 (Microtip/well)

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Magnesium	mg/dl	2.29	2.02	2.56	0.135	0.270	Ortho Vitros Microslide Systems
	mmol/l	0.941	0.828	1.05	0.055	0.109	
Phosphate Inorganic	mg/dl	5.18	4.40	5.96	0.390	0.780	Ortho Vitros Microslide Systems
	mmol/l	1.67	1.42	1.92	0.125	0.250	
Potassium	mmol/l	3.89	3.58	4.20	0.155	0.310	Ortho Vitros Microslide Systems
Protein Total	g/dl	5.75	4.60	6.90	0.575	1.15	Ortho Vitros Microslide Systems
	g/l	57.5	46.0	69.0	5.75	11.5	
PSA Total	ng/ml = µg/l	9.68	7.26	12.1	1.21	2.42	Ortho Vitros 3600/5600/ECi
Sodium	mmol/l	142	135	149	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.38	1.10	1.66	0.140	0.280	Ortho Vitros TSH
	µU/ml = mIU/l	1.46	1.17	1.75	0.145	0.290	Ortho Vitros TSH3
TIBC	µg/dl	255	201	309	27.0	54.0	Ortho Vitros Microslide Systems
	µmol/l	45.6	36.0	55.2	4.80	9.60	
	µg/dl	259	205	313	27.0	54.0	Ortho Vitros Microtip
	µmol/l	46.3	36.6	56.0	4.85	9.70	
Total T3	ng/dl	170	128	212	21.0	42.0	Ortho Vitros 3600/5600/ECi/XT/7600
	ng/ml	1.71	1.28	2.14	0.215	0.430	
	nmol/l	2.62	1.97	3.27	0.325	0.650	
Total T4	ng/ml	68.5	51.4	85.6	8.55	17.1	Ortho Vitros 3600/5600/ECi/XT 7600
	nmol/l	87.8	65.9	110	11.1	22.2	
	µg/dl	6.85	5.14	8.56	0.855	1.71	
Triglycerides	mg/dl	119	100	138	9.50	19.0	Ortho Vitros Microslide Systems
	mmol/l	1.34	1.13	1.55	0.105	0.210	
Urea	mg/dl	42.7	36.3	49.1	3.20	6.40	Ortho Vitros Microslide Systems
	mg/dl (BUN)	19.9	16.9	22.9	1.50	3.00	
	mmol/l	7.10	6.04	8.16	0.530	1.06	
Uric Acid (Urate)	mg/dl	5.87	5.11	6.63	0.380	0.760	Ortho Vitros Microslide Systems
	mmol/l	0.349	0.304	0.394	0.023	0.045	

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RANDOX

Ortho Clinical Diagnostics VITROS (no gen. #)

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.05	3.44	4.66	0.305	0.610	Ortho Vitros Microslide Systems
	g/l	40.5	34.4	46.6	3.05	6.10	
Alkaline Phosphatase	U/l	190	162	218	14.0	28.0	Ortho Vitros Microslide Systems
AST (GOT)	U/l	51	41	61	5.00	10.0	Ortho Vitros MicroSlide visible
Bilirubin Total	mg/dl	1.85	1.46	2.24	0.195	0.390	Ortho Vitros MicroSlide Total Bil
	µmol/l	31.7	25.0	38.4	3.35	6.70	
Calcium	mg/dl	8.50	7.65	9.35	0.425	0.850	Ortho Vitros Microslide Systems
	mmol/l	2.12	1.91	2.33	0.105	0.210	
gamma-GT	U/l	70	60	80	5.00	10.0	Ortho Vitros Microslide Systems
Glucose	mg/dl	105	89.3	121	8.00	16.0	Ortho Vitros Microslide Systems
	mmol/l	5.82	4.95	6.69	0.435	0.870	
HDL - Cholesterol	mg/dl	49.8	42.3	57.3	3.75	7.50	Vitros dHDL, PTA/MgCl2 direct precip.
	mmol/l	1.29	1.10	1.48	0.095	0.190	
Potassium	mmol/l	3.91	3.60	4.22	0.155	0.310	Ortho Vitros Microslide Systems
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
Triglycerides	mg/dl	120	101	139	9.50	19.0	Ortho Vitros Microslide Systems
	mmol/l	1.36	1.14	1.58	0.110	0.220	
Urea	mg/dl	41.3	35.1	47.5	3.10	6.20	Ortho Vitros Microslide Systems
	mg/dl (BUN)	19.2	16.3	22.1	1.45	2.90	
	mmol/l	6.87	5.84	7.90	0.515	1.03	
Uric Acid (Urate)	mg/dl	5.82	5.06	6.58	0.380	0.760	Ortho Vitros Microslide Systems
	mmol/l	0.346	0.301	0.391	0.023	0.045	

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RANDOX

Ortho Clinical Diagnostics Vitros 3600 / ECi

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	2.48	1.86	3.10	0.310	0.620	Ortho Vitros 3600/5600/ECi/XT/7600
	pg/ml	24.8	18.6	31.0	3.10	6.20	
	pmol/l	31.8	23.9	39.7	3.95	7.90	
PSA Total	ng/ml = µg/l	9.26	7.41	11.1	0.920	1.84	Ortho Vitros 3600/5600/ECi
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.41	1.13	1.69	0.140	0.280	Ortho Vitros TSH
Total T3	ng/dl	175	131	219	22.0	44.0	Ortho Vitros 3600/5600/ECi/XT/7600
	ng/ml	1.75	1.31	2.19	0.220	0.440	
	nmol/l	2.69	2.02	3.36	0.335	0.670	
Total T4	ng/ml	65.5	49.1	81.9	8.20	16.4	Ortho Vitros 3600/5600/ECi/XT 7600
	nmol/l	84.0	63.0	105	10.5	21.0	
	µg/dl	6.55	4.91	8.19	0.820	1.64	

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RANDOX

Osmometer Freezing Point Dep.

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/Kg	310	248	372	31.0	62.0	Freezing Point Depression

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RANDOX

Paramedical PKL PPC Automatic Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.94	3.35	4.53	0.295	0.590	Bromocresol Green
	g/l	39.4	33.5	45.3	2.95	5.90	
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	2.16	1.71	2.61	0.225	0.450	Diazo With Sulphanilic Acid
	µmol/l	37.0	29.2	44.8	3.90	7.80	
Cholesterol	mg/dl	148	129	167	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.84	3.34	4.34	0.250	0.500	
	mg/dl	150	131	169	9.50	19.0	Cholesterol Oxidase - IDMS
	mmol/l	3.89	3.38	4.40	0.255	0.510	
gamma-GT	U/l	62	53	71	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	113	96.1	130	8.50	17.0	Glucose Oxidase
	mmol/l	6.27	5.33	7.21	0.470	0.940	
Protein Total	g/dl	5.78	4.62	6.94	0.580	1.16	Biuret reaction, end point
	g/l	57.8	46.2	69.4	5.80	11.6	
Triglycerides	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
Urea	mg/dl	46.5	39.5	53.5	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.74	6.58	8.90	0.580	1.16	
Uric Acid (Urate)	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.361	0.314	0.408	0.024	0.047	
	mg/dl	6.22	5.41	7.03	0.405	0.810	Uricase Perox. with ascorb. ox
	mmol/l	0.370	0.322	0.418	0.024	0.048	
	mg/dl	6.49	5.65	7.33	0.420	0.840	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.386	0.336	0.436	0.025	0.050	

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RANDOX

Radiometer ABL 80 instruments

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	3.94	3.55	4.33	0.195	0.390	Ion Selective Electrode
	mmol/l	0.982	0.884	1.08	0.049	0.098	

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RANDOX

Radiometer ABL 800 Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium Ionised	mg/dl	4.21	3.79	4.63	0.210	0.420	Ion Selective Electrode
	mmol/l	1.05	0.945	1.16	0.055	0.110	
Lactate	mg/dl	11.7	9.59	13.8	1.05	2.10	Ion Selective Electrode
	mmol/l	1.30	1.07	1.53	0.115	0.230	

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RANDOX

Randox RX series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.07	3.46	4.68	0.305	0.610	Bromocresol Green
	g/l	40.7	34.6	46.8	3.05	6.10	
Alkaline Phosphatase	U/l	214	182	246	16.0	32.0	AMP optimised to IFCC
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	63	54	72	4.50	9.00	Randox Liquid Ethylidene pNPG7
Amylase Total	U/l	88	75	101	6.50	13.0	Randox Liquid Ethylidene pNPG7
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bile Acids	µmol/l	25.7	20.6	30.8	2.55	5.10	5th Generation Colorimetric
Bilirubin Direct	mg/dl	1.27	1.00	1.54	0.135	0.270	Diazo With Sulphanilic Acid
	µmol/l	21.7	17.1	26.3	2.30	4.60	
	mg/dl	1.06	0.837	1.28	0.110	0.220	Oxidation to Biliverdin/Vanadate
	µmol/l	18.2	14.4	22.0	1.90	3.80	
Bilirubin Total	mg/dl	2.03	1.60	2.46	0.215	0.430	Diazo With Sulphanilic Acid
	µmol/l	34.7	27.4	42.0	3.65	7.30	
	mg/dl	1.80	1.42	2.18	0.190	0.380	Oxidation to Biliverdin/Vanadate
	µmol/l	30.8	24.3	37.3	3.25	6.50	
Calcium	mg/dl	8.78	7.90	9.66	0.440	0.880	Arsenazo III
	mmol/l	2.19	1.97	2.41	0.110	0.220	
Chloride	mmol/l	96.0	88.3	104	4.00	8.00	ISE Direct
Cholesterol	mg/dl	161	140	182	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.18	3.64	4.72	0.270	0.540	
CK Total	U/l	215	176	254	19.5	39.0	CK-NAC (IFCC)
	U/l	212	174	250	19.0	38.0	CK-NAC substrate start (DGKC)
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Enzymatic UV method
	µmol/l	131	105	157	13.0	26.0	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	115	97.8	132	8.50	17.0	Glucose Oxidase
	mmol/l	6.40	5.44	7.36	0.480	0.960	
	mg/dl	112	95.2	129	8.50	17.0	Hexokinase
	mmol/l	6.24	5.30	7.18	0.470	0.940	
Iron	µg/dl	119	97.6	140	10.5	21.0	Colorimetric without ppt.
	µmol/l	21.2	17.4	25.0	1.90	3.80	
Lactate	mg/dl	12.8	10.5	15.1	1.15	2.30	Colorimetric - Lactate oxidase
	mmol/l	1.42	1.16	1.68	0.130	0.260	
LD (LDH)	U/l	202	172	232	15.0	30.0	L to P, IFCC

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RANDOX

Randox RX series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
LD (LDH)	U/l	395	336	454	29.5	59.0	P to L, German methods
Lipase	U/l	46	37	55	4.50	9.00	Colorimetric Randox
Magnesium	mg/dl	2.24	1.97	2.51	0.135	0.270	Xylidyl Blue
	mmol/l	0.920	0.810	1.03	0.055	0.110	
Phosphate Inorganic	mg/dl	4.93	4.19	5.67	0.370	0.740	Phosphomolybdate UV
	mmol/l	1.59	1.35	1.83	0.120	0.240	
Potassium	mmol/l	3.88	3.57	4.19	0.155	0.310	Enzymatic
	mmol/l	3.95	3.63	4.27	0.160	0.320	ISE Direct
Protein Total	g/dl	5.87	4.70	7.04	0.585	1.17	Biuret reaction, end point
	g/l	58.7	47.0	70.4	5.85	11.7	
Sodium	mmol/l	139	132	146	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE Direct
TIBC	µg/dl	281	222	340	29.5	59.0	Direct Colorimetric
	µmol/l	50.2	39.7	60.7	5.25	10.5	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	46.4	39.4	53.4	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.72	6.56	8.88	0.580	1.16	
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.362	0.315	0.409	0.024	0.047	

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RANDOX

Rayto Chemray Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.13	3.51	4.75	0.310	0.620	Bromocresol Green
	g/l	41.3	35.1	47.5	3.10	6.20	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.03	0.814	1.25	0.110	0.220	Dichlorophenyl Diazonium
	µmol/l	17.6	13.9	21.3	1.85	3.70	
Calcium	mg/dl	8.50	7.65	9.35	0.425	0.850	Arsenazo III
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Cholesterol	mg/dl	157	137	177	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.06	3.53	4.59	0.265	0.530	
	mg/dl	157	137	177	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	4.06	3.53	4.59	0.265	0.530	
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe Rate Blanked
	µmol/l	126	101	151	12.5	25.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	115	97.8	132	8.50	17.0	Glucose Oxidase
	mmol/l	6.37	5.41	7.33	0.480	0.960	
Protein Total	g/dl	6.26	5.01	7.51	0.625	1.25	Biuret reaction, end point
	g/l	62.6	50.1	75.1	6.25	12.5	
Triglycerides	mg/dl	102	85.7	118	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
Uric Acid (Urate)	mg/dl	6.35	5.52	7.18	0.415	0.830	Uricase perox. no ascorb. ox.
	mmol/l	0.378	0.329	0.427	0.025	0.049	
	mg/dl	6.64	5.78	7.50	0.430	0.860	Uricase Perox. with ascorb. ox
	mmol/l	0.395	0.344	0.446	0.026	0.051	

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RANDOX

Rayto RT Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Creatinine	mg/dl	1.47	1.18	1.76	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	130	104	156	13.0	26.0	
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.12	5.20	7.04	0.460	0.920	

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RANDOX

Robonik Prietest

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Creatinine	mg/dl	1.39	1.11	1.67	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	123	98.4	148	12.5	25.0	
Glucose	mg/dl	116	98.6	133	8.50	17.0	Glucose Oxidase
	mmol/l	6.45	5.48	7.42	0.485	0.970	
Triglycerides	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
Urea	mg/dl	45.9	39.0	52.8	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.63	6.49	8.77	0.570	1.14	

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RANDOX

Roche Accu-Chek

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Glucose	mg/dl	117	99.5	135	9.00	18.0	Glucose Dehydrogenase
	mmol/l	6.48	5.51	7.45	0.485	0.970	

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RANDOX

Roche AVL 9100 series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.33	3.90	4.76	0.215	0.430	Ion Selective Electrode
	mmol/l	1.08	0.972	1.19	0.055	0.110	
Chloride	mmol/l	98.7	90.8	107	4.15	8.30	ISE Indirect
Potassium	mmol/l	3.85	3.54	4.16	0.155	0.310	ISE method - indirect
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect

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RANDOX

Roche AVL OMNI S / b221

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.01	3.61	4.41	0.200	0.400	Ion Selective Electrode
	mmol/l	1.00	0.900	1.10	0.050	0.100	

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Roche Cobas c111

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.13	3.51	4.75	0.310	0.620	Bromocresol Green
	g/l	41.3	35.1	47.5	3.10	6.20	
Alkaline Phosphatase	U/l	178	151	205	13.5	27.0	AMP optimised to IFCC
	U/l	175	149	201	13.0	26.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Amylase Total	U/l	76	65	87	5.50	11.0	Other Roche 2-chloro-pNPG7
	U/l	80	68	92	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.13	0.893	1.37	0.120	0.240	Diazo with Dichloroanaline
	µmol/l	19.3	15.2	23.4	2.05	4.10	
	mg/dl	1.25	0.988	1.51	0.130	0.260	Dichlorophenyl Diazonium
	µmol/l	21.3	16.8	25.8	2.25	4.50	
	mg/dl	1.22	0.964	1.48	0.130	0.260	Roche DPD Doumas standardised
	µmol/l	20.9	16.5	25.3	2.20	4.40	
	mg/dl	1.20	0.948	1.45	0.125	0.250	Roche DPD JG standardised
	µmol/l	20.5	16.2	24.8	2.15	4.30	
Bilirubin Total	mg/dl	1.64	1.30	1.98	0.170	0.340	Diazo With Sulphanilic Acid
	µmol/l	28.0	22.1	33.9	2.95	5.90	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Diazonium Ion
	µmol/l	29.0	22.9	35.1	3.05	6.10	
	mg/dl	1.74	1.37	2.11	0.185	0.370	Dichlorophenyl Diazonium
	µmol/l	29.7	23.5	35.9	3.10	6.20	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.62	7.76	9.48	0.430	0.860	Cresolphthalein Complexone
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.50	7.65	9.35	0.425	0.850	NM-BAPTA
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Chloride	mmol/l	97.2	89.4	105	3.90	7.80	ISE Indirect
Cholesterol	mg/dl	147	128	166	9.50	19.0	Cholesterol Dehydrogenase
	mmol/l	3.81	3.31	4.31	0.250	0.500	
	mg/dl	150	131	169	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.89	3.38	4.40	0.255	0.510	
	mg/dl	150	131	169	9.50	19.0	Cholesterol Oxidase - IDMS
	mmol/l	3.89	3.38	4.40	0.255	0.510	
CK Total	U/l	190	156	224	17.0	34.0	CK-NAC (IFCC)
	U/l	192	157	227	17.5	35.0	Creatine Phosphate Substrate Start
Creatinine	mg/dl	1.37	1.10	1.64	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	121	96.8	145	12.0	24.0	

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Roche Cobas c111

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe Rate Blanked
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.39	1.11	1.67	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.37	1.10	1.64	0.135	0.270	Jaffe rate comp. (-18umol/l)
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.39	1.11	1.67	0.140	0.280	Roche Creatinine Plus
	µmol/l	123	98.4	148	12.5	25.0	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-4-Nitroanilide
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.08	5.17	6.99	0.455	0.910	
	mg/dl	111	94.4	128	8.50	17.0	Hexokinase
	mmol/l	6.17	5.24	7.10	0.465	0.930	
HDL - Cholesterol	mg/dl	45.9	39.0	52.8	3.45	6.90	Direct HDL, PEGME
	mmol/l	1.19	1.01	1.37	0.090	0.180	
	mg/dl	45.6	38.8	52.4	3.40	6.80	Direct HDL, Roche 4th gen.
	mmol/l	1.18	1.00	1.36	0.090	0.180	
Iron	µg/dl	113	92.7	133	10.0	20.0	Colorimetric without ppt.
	µmol/l	20.3	16.6	24.0	1.85	3.70	
LD (LDH)	U/l	204	173	235	15.5	31.0	L to P, IFCC
Lipase	U/l	33	26	40	3.50	7.00	Colorimetric Roche
Magnesium	mg/dl	2.33	2.05	2.61	0.140	0.280	Chlorphosphonazo III
	mmol/l	0.960	0.845	1.08	0.060	0.120	
	mg/dl	2.35	2.07	2.63	0.140	0.280	Xylidyl Blue
	mmol/l	0.968	0.852	1.08	0.056	0.112	
Phosphate Inorganic	mg/dl	5.18	4.40	5.96	0.390	0.780	Phosphomolybdate Enzymatic
	mmol/l	1.67	1.42	1.92	0.125	0.250	
	mg/dl	5.05	4.29	5.81	0.380	0.760	Phosphomolybdate UV
	mmol/l	1.63	1.39	1.87	0.120	0.240	
Protein Total	g/dl	5.74	4.59	6.89	0.575	1.15	Biuret reaction, end point
	g/l	57.4	45.9	68.9	5.75	11.5	
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	

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RANDOX

Roche Cobas c111

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Triglycerides	mg/dl	102	85.7	118	8.00	16.0	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
Urea	mg/dl	46.0	39.1	52.9	3.45	6.90	Urease, end point
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.65	6.50	8.80	0.575	1.15	
	mg/dl	44.3	37.7	50.9	3.30	6.60	Urease, kinetic
	mg/dl (BUN)	20.6	17.5	23.7	1.55	3.10	
	mmol/l	7.37	6.26	8.48	0.555	1.11	
Uric Acid (Urate)	mg/dl	5.92	5.15	6.69	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.352	0.306	0.398	0.023	0.046	
	mg/dl	6.05	5.26	6.84	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.360	0.313	0.407	0.024	0.047	
	mg/dl	6.00	5.22	6.78	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.357	0.311	0.403	0.023	0.046	

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RANDOX

Roche Cobas c303/c503

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.10	3.49	4.71	0.305	0.610	Bromocresol Green
	g/l	41.0	34.9	47.1	3.05	6.10	
	g/dl	4.05	3.44	4.66	0.305	0.610	Bromocresol Purple
	g/l	40.5	34.4	46.6	3.05	6.10	
	g/dl	3.99	3.39	4.59	0.300	0.600	Turbidimetric Assays
	g/l	39.9	33.9	45.9	3.00	6.00	
Alkaline Phosphatase	U/l	164	139	189	12.5	25.0	AMP optimised to IFCC
	U/l	164	139	189	12.5	25.0	Colorimetric
	U/l	166	141	191	12.5	25.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	39	31	47	4.00	8.00	Colorimetric
	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	56	48	64	4.00	8.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	79	67	91	6.00	12.0	BM/Roche, Colorimetric pNPG7
	U/l	80	68	92	6.00	12.0	Other Roche 2-chloro-pNPG7
	U/l	79	67	91	6.00	12.0	Roche Integra 2-chloro-pNPG7
	U/l	79	67	91	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	47	38	56	4.50	9.00	Colorimetric
	U/l	50	40	60	5.00	10.0	Tris Buffer Without P5P
Bicarbonate	mmol/l	11.7	9.28	14.1	1.20	2.40	Colorimetric
	mmol/l	11.8	9.36	14.2	1.20	2.40	Enzymatic
	mmol/l	11.8	9.36	14.2	1.20	2.40	PEP Carboxylase
Bile Acids	µmol/l	25.0	20.0	30.0	2.50	5.00	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.00	0.790	1.21	0.105	0.210	Roche DPD Doumas standardised
	µmol/l	17.1	13.5	20.7	1.80	3.60	
Bilirubin Total	mg/dl	1.67	1.32	2.02	0.175	0.350	Diazo With Dichloroaniline
	µmol/l	28.6	22.6	34.6	3.00	6.00	
	mg/dl	1.63	1.29	1.97	0.170	0.340	Diazo With Sulphanilic Acid
	µmol/l	27.9	22.0	33.8	2.95	5.90	
	mg/dl	1.61	1.27	1.95	0.170	0.340	Diazonium Ion
	µmol/l	27.6	21.8	33.4	2.90	5.80	
	mg/dl	1.63	1.29	1.97	0.170	0.340	Dichlorophenyl Diazonium
	µmol/l	27.8	22.0	33.6	2.90	5.80	
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
	mg/dl	8.54	7.69	9.39	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.13	1.92	2.34	0.105	0.210	
	mg/dl	8.50	7.65	9.35	0.425	0.850	NM-BAPTA
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Chloride	mmol/l	95.3	87.7	103	3.85	7.70	ISE Indirect

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Roche Cobas c303/c503

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Cholesterol	mg/dl	147	128	166	9.50	19.0	Cholesterol Dehydrogenase
	mmol/l	3.81	3.31	4.31	0.250	0.500	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.95	3.44	4.46	0.255	0.510	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.95	3.44	4.46	0.255	0.510	
Cholinesterase	U/l	5618	4494	6742	562	1124	Colorimetric - Butyrylthiocholine
CK Total	U/l	194	159	229	17.5	35.0	CK-NAC (IFCC)
	U/l	187	153	221	17.0	34.0	CK-NAC substrate start (DGKC)
	U/l	194	159	229	17.5	35.0	Creatine Phosphate Substrate Start
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline Picrate With Deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.51	1.21	1.81	0.150	0.300	IDMS Traceable
	µmol/l	134	107	161	13.5	27.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe Rate Blanked
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	Jaffe rate comp. (-18umol/l)
	µmol/l	129	103	155	13.0	26.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	Roche Creatinine Plus
	µmol/l	129	103	155	13.0	26.0	
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Dehydrogenase
	mmol/l	5.97	5.07	6.87	0.450	0.900	
	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.06	5.15	6.97	0.455	0.910	
	mg/dl	109	92.7	125	8.00	16.0	Hexokinase
	mmol/l	6.05	5.14	6.96	0.455	0.910	
HDL - Cholesterol	mg/dl	47.1	40.0	54.2	3.55	7.10	Direct HDL, Roche 4th gen.
	mmol/l	1.22	1.04	1.40	0.090	0.180	
Iron	µg/dl	107	87.7	126	9.50	19.0	Colorimetric with ppt.
	µmol/l	19.1	15.7	22.5	1.70	3.40	
	µg/dl	107	87.7	126	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.1	15.7	22.5	1.70	3.40	

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Roche Cobas c303/c503

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Lactate	mg/dl	12.3	10.1	14.5	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.37	1.12	1.62	0.125	0.250	
LD (LDH)	U/l	202	172	232	15.0	30.0	L to P, IFCC
	U/l	199	169	229	15.0	30.0	Lactate to Pyruvate methods
Lipase	U/l	35	28	42	3.50	7.00	Colorimetric Roche
	U/l	35	28	42	3.50	7.00	Colorimetric Roche ACN(8)789/ID 0-052
	U/l	35	28	42	3.50	7.00	Other Colorimetric
	U/l	35	28	42	3.50	7.00	Roche Turbidimetric with colipase
Lithium	mg/dl	0.708	0.623	0.793	0.043	0.085	Spectrophotometric
	mmol/l	1.02	0.898	1.14	0.060	0.120	
Magnesium	mg/dl	2.37	2.09	2.65	0.140	0.280	Chlorphosphonazo III
	mmol/l	0.977	0.860	1.09	0.057	0.113	
	mg/dl	2.37	2.09	2.65	0.140	0.280	Xylidyl Blue
	mmol/l	0.974	0.857	1.09	0.058	0.116	
Osmolality	mOsm/Kg	292	234	350	29.0	58.0	Calculated
Phosphate Inorganic	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate Enzymatic
	mmol/l	1.62	1.38	1.86	0.120	0.240	
	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate UV
	mmol/l	1.62	1.38	1.86	0.120	0.240	
Potassium	mmol/l	3.88	3.57	4.19	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.64	4.51	6.77	0.565	1.13	Biuret reaction, CX4/5/7
	g/l	56.4	45.1	67.7	5.65	11.3	
	g/dl	5.66	4.53	6.79	0.565	1.13	Biuret reaction, end point
	g/l	56.6	45.3	67.9	5.65	11.3	
	g/dl	5.62	4.50	6.74	0.560	1.12	Biuret reaction, kinetic
	g/l	56.2	45.0	67.4	5.60	11.2	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µg/dl	238	188	288	25.0	50.0	FE+UIBC(saturation with iron)
	µmol/l	42.5	33.6	51.4	4.45	8.90	
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	102	85.7	118	8.00	16.0	Lipase/GK UV., 0.11 mmol/l correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	

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Roche Cobas c303/c503

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	45.9	39.0	52.8	3.45	6.90	Urease, end point
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.64	6.49	8.79	0.575	1.15	
	mg/dl	45.8	38.9	52.7	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
	mmol/l	7.62	6.48	8.76	0.570	1.14	
Uric Acid (Urate)	mg/dl	5.82	5.06	6.58	0.380	0.760	Uricase @ 293 nm
	mmol/l	0.346	0.301	0.391	0.023	0.045	
	mg/dl	5.95	5.18	6.72	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.354	0.308	0.400	0.023	0.046	
	mg/dl	5.93	5.16	6.70	0.385	0.770	Uricase Perox. with ascorb. ox
	mmol/l	0.353	0.307	0.399	0.023	0.046	
	mg/dl	5.98	5.20	6.76	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.356	0.310	0.402	0.023	0.046	
	mg/dl	6.02	5.24	6.80	0.390	0.780	Uricase, catalase 340nm.
	mmol/l	0.358	0.311	0.405	0.024	0.047	

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Roche Cobas c311

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.07	3.46	4.68	0.305	0.610	Bromocresol Green
	g/l	40.7	34.6	46.8	3.05	6.10	
	g/dl	4.08	3.47	4.69	0.305	0.610	Bromocresol Purple
	g/l	40.8	34.7	46.9	3.05	6.10	
	g/dl	4.15	3.53	4.77	0.310	0.620	Turbidimetric Assays
	g/l	41.5	35.3	47.7	3.10	6.20	
Alkaline Phosphatase	U/l	176	150	202	13.0	26.0	AMP optimised to IFCC
	U/l	177	150	204	13.5	27.0	Colorimetric
	U/l	176	150	202	13.0	26.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	39	31	47	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
	U/l	39	31	47	4.00	8.00	Phosphate buffer, DGKC
	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	80	68	92	6.00	12.0	Immunoinhibition, EPS substrate
	U/l	57	48	66	4.50	9.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	80	68	92	6.00	12.0	BM/Roche, Colorimetric pNPG7
	U/l	78	66	90	6.00	12.0	Other Roche 2-chloro-pNPG7
	U/l	80	68	92	6.00	12.0	Roche Integra 2-chloro-pNPG7
	U/l	80	68	92	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	12.2	9.67	14.7	1.25	2.50	Enzymatic
Bilirubin Direct	mg/dl	1.19	0.940	1.44	0.125	0.250	Diazo With Sulphanilic Acid
	µmol/l	20.4	16.1	24.7	2.15	4.30	
	mg/dl	1.19	0.940	1.44	0.125	0.250	Dichlorophenyl Diazonium
	µmol/l	20.4	16.1	24.7	2.15	4.30	
	mg/dl	1.23	0.972	1.49	0.130	0.260	Roche DPD JG standardised
	µmol/l	21.1	16.7	25.5	2.20	4.40	
Bilirubin Total	mg/dl	1.73	1.37	2.09	0.180	0.360	Diazo With Dichloroaniline
	µmol/l	29.5	23.3	35.7	3.10	6.20	
	mg/dl	1.68	1.33	2.03	0.175	0.350	Diazo With Sulphanilic Acid
	µmol/l	28.8	22.8	34.8	3.00	6.00	
	mg/dl	1.69	1.34	2.04	0.175	0.350	Diazonium Ion
	µmol/l	28.9	22.8	35.0	3.05	6.10	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Dichlorophenyl Diazonium
	µmol/l	29.0	22.9	35.1	3.05	6.10	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	Arsenazo III
	mmol/l	2.13	1.92	2.34	0.105	0.210	
	mg/dl	8.46	7.61	9.31	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.11	1.90	2.32	0.105	0.210	

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Roche Cobas c311

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	NM-BAPTA
	mmol/l	2.13	1.92	2.34	0.105	0.210	
Chloride	mmol/l	95.2	87.6	103	3.90	7.80	ISE Indirect
Cholesterol	mg/dl	151	131	171	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	3.91	3.40	4.42	0.255	0.510	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.95	3.44	4.46	0.255	0.510	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.98	3.46	4.50	0.260	0.520	
Cholinesterase	U/l	5554	4443	6665	556	1111	Colorimetric - Butyrylthiocholine
CK Total	U/l	198	162	234	18.0	36.0	CK-NAC (IFCC)
	U/l	196	161	231	17.5	35.0	CK-NAC substrate start (DGKC)
	U/l	200	164	236	18.0	36.0	Creatine Phosphate Substrate Start
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	IDMS Traceable
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	Jaffe Rate Blanked
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate comp. (-18umol/l)
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.45	1.16	1.74	0.145	0.290	Roche Creatinine Plus
	µmol/l	128	102	154	13.0	26.0	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
Glucose	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.06	5.15	6.97	0.455	0.910	
	mg/dl	109	92.7	125	8.00	16.0	Hexokinase
	mmol/l	6.04	5.13	6.95	0.455	0.910	
HDL - Cholesterol	mg/dl	45.6	38.8	52.4	3.40	6.80	Direct HDL, Clearance method
	mmol/l	1.18	1.00	1.36	0.090	0.180	
	mg/dl	45.6	38.8	52.4	3.40	6.80	Direct HDL, PEGME
	mmol/l	1.18	1.00	1.36	0.090	0.180	
	mg/dl	47.5	40.4	54.6	3.55	7.10	Direct HDL, PPD
	mmol/l	1.23	1.05	1.41	0.090	0.180	

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Roche Cobas c311

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
HDL - Cholesterol	mg/dl	46.3	39.4	53.2	3.45	6.90	Direct HDL, Roche 4th gen.
	mmol/l	1.20	1.02	1.38	0.090	0.180	
Iron	µg/dl	110	90.2	130	10.0	20.0	Colorimetric with ppt.
	µmol/l	19.6	16.1	23.1	1.75	3.50	
	µg/dl	110	90.2	130	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.6	16.1	23.1	1.75	3.50	
Lactate	mg/dl	12.4	10.2	14.6	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.38	1.13	1.63	0.125	0.250	
LD (LDH)	U/l	201	171	231	15.0	30.0	L to P, IFCC
	U/l	201	171	231	15.0	30.0	Lactate to Pyruvate methods
Lipase	U/l	35	28	42	3.50	7.00	Colorimetric Roche
	U/l	35	28	42	3.50	7.00	Roche Turbidimetric with colipase
Lithium	mg/dl	0.692	0.609	0.775	0.042	0.083	Spectrophotometric
	mmol/l	0.996	0.876	1.12	0.062	0.124	
Magnesium	mg/dl	2.33	2.05	2.61	0.140	0.280	Atomic Absorption
	mmol/l	0.960	0.845	1.08	0.060	0.120	
	mg/dl	2.32	2.04	2.60	0.140	0.280	Chlorphosphonazo III
	mmol/l	0.953	0.839	1.07	0.059	0.117	
	mg/dl	2.34	2.06	2.62	0.140	0.280	Enzymatic
	mmol/l	0.964	0.848	1.08	0.058	0.116	
	mg/dl	2.25	1.98	2.52	0.135	0.270	Methylthymol Blue
	mmol/l	0.925	0.814	1.04	0.058	0.115	
	mg/dl	2.33	2.05	2.61	0.140	0.280	Xylidyl Blue
	mmol/l	0.959	0.844	1.07	0.056	0.111	
Phosphate Inorganic	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate Enzymatic
	mmol/l	1.62	1.38	1.86	0.120	0.240	
	mg/dl	5.05	4.29	5.81	0.380	0.760	Phosphomolybdate UV
	mmol/l	1.63	1.39	1.87	0.120	0.240	
Potassium	mmol/l	3.87	3.56	4.18	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.69	4.55	6.83	0.570	1.14	Biuret reaction, end point
	g/l	56.9	45.5	68.3	5.70	11.4	
	g/dl	5.74	4.59	6.89	0.575	1.15	Biuret reaction, kinetic
	g/l	57.4	45.9	68.9	5.75	11.5	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µg/dl	238	188	288	25.0	50.0	Calculated from Transferrin
	µmol/l	42.6	33.7	51.5	4.45	8.90	
	µg/dl	235	186	284	24.5	49.0	Direct Colorimetric
	µmol/l	42.1	33.3	50.9	4.40	8.80	

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Roche Cobas c311

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
TIBC	µg/dl	241	190	292	25.5	51.0	FE+UIBC(saturation with iron)
	µmol/l	43.1	34.0	52.2	4.55	9.10	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GK UV., 0.11 mmol/l correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
Urea	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease, end point
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.76	6.60	8.92	0.580	1.16	
	mg/dl	46.8	39.8	53.8	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.79	6.62	8.96	0.585	1.17	
Uric Acid (Urate)	mg/dl	6.02	5.24	6.80	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.358	0.311	0.405	0.024	0.047	
	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase Perox. with ascorb. ox
	mmol/l	0.359	0.312	0.406	0.024	0.047	
	mg/dl	6.02	5.24	6.80	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.358	0.311	0.405	0.024	0.047	
	mg/dl	5.87	5.11	6.63	0.380	0.760	Uricase, catalase 340nm.
	mmol/l	0.349	0.304	0.394	0.023	0.045	
Zinc	µg/dl	166	133	199	16.5	33.0	Colorimetric without deprot.
	µmol/l	25.4	20.3	30.5	2.55	5.10	

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RANDOX

Roche Cobas c501/c502

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Acid Phosphatase (Total)	U/l	21	14	28	3.50	7.00	Naphthyl phos. sub., kinetic
Albumin	g/dl	4.08	3.47	4.69	0.305	0.610	Bromocresol Green
	g/l	40.8	34.7	46.9	3.05	6.10	
	g/dl	4.16	3.54	4.78	0.310	0.620	Bromocresol Purple
	g/l	41.6	35.4	47.8	3.10	6.20	
	g/dl	3.94	3.35	4.53	0.295	0.590	Turbidimetric Assays
	g/l	39.4	33.5	45.3	2.95	5.90	
Alkaline Phosphatase	U/l	179	152	206	13.5	27.0	AMP optimised to IFCC
	U/l	179	152	206	13.5	27.0	Colorimetric
	U/l	179	152	206	13.5	27.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	38	30	46	4.00	8.00	Colorimetric
	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	56	48	64	4.00	8.00	Immunoinhibition, EPS substrate
	U/l	56	48	64	4.00	8.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	79	67	91	6.00	12.0	BM/Roche, Colorimetric pNPG7
	U/l	79	67	91	6.00	12.0	Other Roche 2-chloro-pNPG7
	U/l	79	67	91	6.00	12.0	Randox Liquid Ethylidene pNPG7
	U/l	79	67	91	6.00	12.0	Roche Integra 2-chloro-pNPG7
	U/l	79	67	91	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	35	28	42	3.50	7.00	Colorimetric
	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	12.2	9.67	14.7	1.25	2.50	Colorimetric
	mmol/l	12.3	9.75	14.9	1.30	2.60	Enzymatic
	mmol/l	11.8	9.36	14.2	1.20	2.40	PEP Carboxylase
Bile Acids	µmol/l	26.3	21.0	31.6	2.65	5.30	Enzymatic Colorimetric
	µmol/l	24.5	19.6	29.4	2.45	4.90	Enzymatic Colorimetric - Sentinel
Bilirubin Direct	mg/dl	1.17	0.924	1.42	0.125	0.250	Diazo with Dichloroanaline
	µmol/l	20.0	15.8	24.2	2.10	4.20	
	mg/dl	1.16	0.916	1.40	0.120	0.240	Diazo With Sulphanilic Acid
	µmol/l	19.9	15.7	24.1	2.10	4.20	
	mg/dl	1.16	0.916	1.40	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.9	15.7	24.1	2.10	4.20	
	mg/dl	1.19	0.940	1.44	0.125	0.250	Roche DPD JG standardised
	µmol/l	20.4	16.1	24.7	2.15	4.30	
Bilirubin Total	mg/dl	1.72	1.36	2.08	0.180	0.360	Diazo With Dichloroaniline
	µmol/l	29.4	23.2	35.6	3.10	6.20	
	mg/dl	1.68	1.33	2.03	0.175	0.350	Diazo With Sulphanilic Acid
	µmol/l	28.8	22.8	34.8	3.00	6.00	

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RANDOX

Roche Cobas c501/c502

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Bilirubin Total	mg/dl	1.69	1.34	2.04	0.175	0.350	Diazonium Ion
	µmol/l	28.9	22.8	35.0	3.05	6.10	
	mg/dl	1.69	1.34	2.04	0.175	0.350	Dichlorophenyl Diazonium
	µmol/l	28.9	22.8	35.0	3.05	6.10	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.50	7.65	9.35	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.12	1.91	2.33	0.105	0.210	
	mg/dl	8.50	7.65	9.35	0.425	0.850	NM-BAPTA
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Chloride	mmol/l	95.0	87.4	103	4.00	8.00	ISE Indirect
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Dehydrogenase
	mmol/l	4.04	3.51	4.57	0.265	0.530	
	mg/dl	152	132	172	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.94	3.43	4.45	0.255	0.510	
	mg/dl	152	132	172	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.94	3.43	4.45	0.255	0.510	
Cholinesterase	U/l	5588	4470	6706	559	1118	Colorimetric - Benzoylcholine
	U/l	5580	4464	6696	558	1116	Colorimetric - Butyrylthiocholine
CK Total	U/l	196	161	231	17.5	35.0	CK-NAC (IFCC)
	U/l	197	162	232	17.5	35.0	CK-NAC serum start (DGKC)
	U/l	192	157	227	17.5	35.0	CK-NAC substrate start (DGKC)
	U/l	192	157	227	17.5	35.0	Creatine Phosphate Substrate Start
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	128	102	154	13.0	26.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Jaffe Rate Blanked
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Jaffe rate comp. (-18umol/l)
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	Roche Creatinine Plus
	µmol/l	129	103	155	13.0	26.0	
Free T4	ng/dl	1.65	1.24	2.06	0.205	0.410	Roche Cobas e601/ 602
	pg/ml	16.5	12.4	20.6	2.05	4.10	
	pmol/l	21.1	15.8	26.4	2.65	5.30	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-4-Nitroanilide

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Roche Cobas c501/c502

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Dehydrogenase
	mmol/l	5.97	5.07	6.87	0.450	0.900	
	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.08	5.17	6.99	0.455	0.910	
	mg/dl	109	92.7	125	8.00	16.0	Hexokinase
	mmol/l	6.04	5.13	6.95	0.455	0.910	
HDL - Cholesterol	mg/dl	47.5	40.4	54.6	3.55	7.10	Direct HDL, Immunoseparation
	mmol/l	1.23	1.05	1.41	0.090	0.180	
	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL, PEGME
	mmol/l	1.21	1.03	1.39	0.090	0.180	
	mg/dl	45.9	39.0	52.8	3.45	6.90	Direct HDL, PPD
	mmol/l	1.19	1.01	1.37	0.090	0.180	
	mg/dl	46.3	39.4	53.2	3.45	6.90	Direct HDL, Roche 4th gen.
	mmol/l	1.20	1.02	1.38	0.090	0.180	
Iron	µg/dl	110	90.2	130	10.0	20.0	Colorimetric with ppt.
	µmol/l	19.7	16.2	23.2	1.75	3.50	
	µg/dl	110	90.2	130	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.7	16.2	23.2	1.75	3.50	
Lactate	mg/dl	12.3	10.1	14.5	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.37	1.12	1.62	0.125	0.250	
LD (LDH)	U/l	200	170	230	15.0	30.0	L to P, IFCC
	U/l	200	170	230	15.0	30.0	Lactate to Pyruvate methods
Lipase	U/l	35	28	42	3.50	7.00	Colorimetric Roche
	U/l	35	28	42	3.50	7.00	Other Colorimetric
	U/l	36	29	43	3.50	7.00	Roche Turbidimetric with colipase
Lithium	mg/dl	0.701	0.617	0.785	0.042	0.084	Ion Selective Electrode
	mmol/l	1.01	0.889	1.13	0.060	0.120	
	mg/dl	0.685	0.603	0.767	0.041	0.082	Spectrophotometric
	mmol/l	0.987	0.869	1.11	0.062	0.123	
Magnesium	mg/dl	2.35	2.07	2.63	0.140	0.280	Arsenazo III
	mmol/l	0.965	0.849	1.08	0.058	0.115	
	mg/dl	2.35	2.07	2.63	0.140	0.280	Atomic Absorption
	mmol/l	0.967	0.851	1.08	0.057	0.113	
	mg/dl	2.34	2.06	2.62	0.140	0.280	Calmagite
	mmol/l	0.961	0.846	1.08	0.060	0.119	
	mg/dl	2.34	2.06	2.62	0.140	0.280	Chlorphosphonazo III
	mmol/l	0.963	0.847	1.08	0.059	0.117	
	mg/dl	2.32	2.04	2.60	0.140	0.280	Enzymatic
	mmol/l	0.954	0.840	1.07	0.058	0.116	

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Roche Cobas c501/c502

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Magnesium	mg/dl	2.27	2.00	2.54	0.135	0.270	Methylthymol Blue
	mmol/l	0.933	0.821	1.05	0.059	0.117	
	mg/dl	2.34	2.06	2.62	0.140	0.280	Xylidyl Blue
	mmol/l	0.963	0.847	1.08	0.059	0.117	
Osmolality	mOsm/Kg	292	234	350	29.0	58.0	Calculated
Phosphate Inorganic	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate Enzymatic
	mmol/l	1.62	1.38	1.86	0.120	0.240	
	mg/dl	5.02	4.27	5.77	0.375	0.750	Phosphomolybdate UV
	mmol/l	1.62	1.38	1.86	0.120	0.240	
Potassium	mmol/l	3.87	3.56	4.18	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.66	4.53	6.79	0.565	1.13	Biuret reaction, end point
	g/l	56.6	45.3	67.9	5.65	11.3	
	g/dl	5.66	4.53	6.79	0.565	1.13	Biuret reaction, kinetic
	g/l	56.6	45.3	67.9	5.65	11.3	
PSA Total	ng/ml = µg/l	9.37	7.03	11.7	1.17	2.33	Roche Cobas e601/602
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.64	1.31	1.97	0.165	0.330	Roche Cobas e601/ 602
TIBC	µg/dl	254	201	307	26.5	53.0	Calculated from Transferrin
	µmol/l	45.5	35.9	55.1	4.80	9.60	
	µg/dl	244	193	295	25.5	51.0	Direct Colorimetric
	µmol/l	43.6	34.4	52.8	4.60	9.20	
	µg/dl	233	184	282	24.5	49.0	FE+UIBC(saturation with iron)
	µmol/l	41.6	32.9	50.3	4.35	8.70	
Total T3	ng/dl	156	117	195	19.5	39.0	Roche Cobas e601/ 602
	ng/ml	1.57	1.18	1.96	0.195	0.390	
	nmol/l	2.41	1.81	3.01	0.300	0.600	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/GK UV., 0.11 mmol/l correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	

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Roche Cobas c501/c502

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	46.7	39.7	53.7	3.50	7.00	Urease, end point
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.77	6.60	8.94	0.585	1.17	
	mg/dl	46.2	39.3	53.1	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.69	6.54	8.84	0.575	1.15	
Uric Acid (Urate)	mg/dl	5.93	5.16	6.70	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.353	0.307	0.399	0.023	0.046	
	mg/dl	5.93	5.16	6.70	0.385	0.770	Uricase Perox. with ascorb. ox
	mmol/l	0.353	0.307	0.399	0.023	0.046	
	mg/dl	5.97	5.19	6.75	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.355	0.309	0.401	0.023	0.046	
	mg/dl	5.97	5.19	6.75	0.390	0.780	Uricase, catalase 340nm.
	mmol/l	0.355	0.309	0.401	0.023	0.046	
Zinc	µg/dl	155	124	186	15.5	31.0	Colorimetric with deprot.
	µmol/l	23.7	19.0	28.4	2.35	4.70	

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RANDOX

Roche Cobas c701 / c702 / c711

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.07	3.46	4.68	0.305	0.610	Bromocresol Green
	g/l	40.7	34.6	46.8	3.05	6.10	
	g/dl	4.03	3.43	4.63	0.300	0.600	Turbidimetric Assays
	g/l	40.3	34.3	46.3	3.00	6.00	
Alkaline Phosphatase	U/l	172	146	198	13.0	26.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	57	48	66	4.50	9.00	Immunoinhibition, EPS substrate
	U/l	56	48	64	4.00	8.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	78	66	90	6.00	12.0	BM/Roche, Colorimetric pNPG7
	U/l	79	67	91	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	12.9	10.2	15.6	1.35	2.70	Enzymatic
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.19	0.940	1.44	0.125	0.250	Dichlorophenyl Diazonium
	µmol/l	20.3	16.0	24.6	2.15	4.30	
	mg/dl	1.22	0.964	1.48	0.130	0.260	Roche DPD JG standardised
	µmol/l	20.8	16.4	25.2	2.20	4.40	
Bilirubin Total	mg/dl	1.70	1.34	2.06	0.180	0.360	Diazo With Sulphanilic Acid
	µmol/l	29.1	23.0	35.2	3.05	6.10	
	mg/dl	1.68	1.33	2.03	0.175	0.350	Diazonium Ion
	µmol/l	28.7	22.7	34.7	3.00	6.00	
	mg/dl	1.67	1.32	2.02	0.175	0.350	Dichlorophenyl Diazonium
	µmol/l	28.6	22.6	34.6	3.00	6.00	
Calcium	mg/dl	8.38	7.54	9.22	0.420	0.840	Cresolphthalein Complexone
	mmol/l	2.09	1.88	2.30	0.105	0.210	
	mg/dl	8.46	7.61	9.31	0.425	0.850	NM-BAPTA
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Chloride	mmol/l	95.9	88.2	104	4.05	8.10	ISE Indirect
Cholesterol	mg/dl	152	132	172	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.93	3.42	4.44	0.255	0.510	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.95	3.44	4.46	0.255	0.510	
Cholinesterase	U/l	5525	4420	6630	553	1105	Colorimetric - Butyrylthiocholine
CK Total	U/l	191	157	225	17.0	34.0	CK-NAC (IFCC)
	U/l	187	153	221	17.0	34.0	CK-NAC substrate start (DGKC)
Copper	µg/dl	101	80.8	121	10.0	20.0	Colorimetric
	µmol/l	15.9	12.7	19.1	1.60	3.20	

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RANDOX

Roche Cobas c701 / c702 / c711

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	IDMS Traceable
	µmol/l	128	102	154	13.0	26.0	
	mg/dl	1.45	1.16	1.74	0.145	0.290	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	128	102	154	13.0	26.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe rate comp. (-18umol/l)
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Roche Creatinine Plus
	µmol/l	131	105	157	13.0	26.0	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Hexokinase
	mmol/l	5.99	5.09	6.89	0.450	0.900	
HDL - Cholesterol	mg/dl	45.9	39.0	52.8	3.45	6.90	Direct HDL, Roche 4th gen.
	mmol/l	1.19	1.01	1.37	0.090	0.180	
Iron	µg/dl	106	86.9	125	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.0	15.6	22.4	1.70	3.40	
Lactate	mg/dl	12.2	10.0	14.4	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.35	1.11	1.59	0.120	0.240	
LD (LDH)	U/l	201	171	231	15.0	30.0	L to P, IFCC
Lipase	U/l	35	28	42	3.50	7.00	Colorimetric Roche
Lithium	mg/dl	0.708	0.623	0.793	0.043	0.085	Spectrophotometric
	mmol/l	1.02	0.898	1.14	0.060	0.120	
Magnesium	mg/dl	2.38	2.09	2.67	0.145	0.290	Chlorphosphonazo III
	mmol/l	0.979	0.862	1.10	0.061	0.121	
	mg/dl	2.37	2.09	2.65	0.140	0.280	Xylidyl Blue
	mmol/l	0.975	0.858	1.09	0.058	0.115	
Osmolality	mOsm/Kg	291	233	349	29.0	58.0	Calculated
Phosphate Inorganic	mg/dl	4.96	4.22	5.70	0.370	0.740	Phosphomolybdate UV
	mmol/l	1.60	1.36	1.84	0.120	0.240	
Potassium	mmol/l	3.88	3.57	4.19	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.65	4.52	6.78	0.565	1.13	Biuret reaction, end point
	g/l	56.5	45.2	67.8	5.65	11.3	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µg/dl	240	190	290	25.0	50.0	FE+UIBC(saturation with iron)
	µmol/l	43.0	34.0	52.0	4.50	9.00	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GK UV. no correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	

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RANDOX

Roche Cobas c701 / c702 / c711

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GK UV., 0.11 mmol/l correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
Urea	mg/dl	45.9	39.0	52.8	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.63	6.49	8.77	0.570	1.14	
Uric Acid (Urate)	mg/dl	5.85	5.09	6.61	0.380	0.760	Uricase perox. no ascorb. ox.
	mmol/l	0.348	0.303	0.393	0.023	0.045	
	mg/dl	5.80	5.05	6.55	0.375	0.750	Uricase Perox. with ascorb. ox
	mmol/l	0.345	0.300	0.390	0.023	0.045	
	mg/dl	5.83	5.07	6.59	0.380	0.760	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.347	0.302	0.392	0.023	0.045	

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RANDOX

Roche Cobas e402/e801

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.74	1.31	2.17	0.215	0.430	Roche Cobas e402/e801
	pg/ml	17.4	13.1	21.7	2.15	4.30	
	pmol/l	22.3	16.7	27.9	2.80	5.60	
PSA Total	ng/ml = µg/l	10.0	7.50	12.5	1.25	2.50	Roche Cobas e402/e801
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.57	1.26	1.88	0.155	0.310	Roche Cobas e402/e801
Total T3	ng/dl	158	119	197	19.5	39.0	Roche Cobas e402/e801
	ng/ml	1.59	1.19	1.99	0.200	0.400	
	nmol/l	2.44	1.83	3.05	0.305	0.610	
Total T4	ng/ml	69.7	52.3	87.1	8.70	17.4	Roche Cobas e402/e801
	nmol/l	89.3	67.0	112	11.4	22.7	
	µg/dl	6.97	5.23	8.71	0.870	1.74	

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RANDOX

Roche Cobas e411

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.67	1.25	2.09	0.210	0.420	Roche Cobas 4000/e411
	pg/ml	16.7	12.5	20.9	2.10	4.20	
	pmol/l	21.4	16.1	26.7	2.65	5.30	
PSA Total	ng/ml = µg/l	9.98	7.49	12.5	1.26	2.52	Roche Cobas 4000/e411
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.69	1.35	2.03	0.170	0.340	Roche Cobas 4000/e411
	µU/ml = mlU/l	1.62	1.30	1.94	0.160	0.320	Roche Elecsys
Total T3	ng/dl	158	119	197	19.5	39.0	Roche Cobas 4000/e411
	ng/ml	1.59	1.19	1.99	0.200	0.400	
	nmol/l	2.44	1.83	3.05	0.305	0.610	
	ng/dl	157	118	196	19.5	39.0	Roche Elecsys
	ng/ml	1.58	1.19	1.97	0.195	0.390	
	nmol/l	2.42	1.82	3.02	0.300	0.600	
Total T4	ng/ml	71.7	53.8	89.6	8.95	17.9	Roche Cobas 4000/e411
	nmol/l	91.9	68.9	115	11.6	23.1	
	µg/dl	7.17	5.38	8.96	0.895	1.79	
	ng/ml	76.7	57.5	95.9	9.60	19.2	Roche Elecsys
	nmol/l	98.4	73.8	123	12.3	24.6	
	µg/dl	7.68	5.76	9.60	0.960	1.92	

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RANDOX

Roche Cobas e601/602

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.99	3.39	4.59	0.300	0.600	Bromocresol Green
	g/l	39.9	33.9	45.9	3.00	6.00	
Free T4	ng/dl	1.66	1.25	2.07	0.205	0.410	Roche Cobas e601/ 602
	pg/ml	16.6	12.5	20.7	2.05	4.10	
	pmol/l	21.3	16.0	26.6	2.65	5.30	
Protein Total	g/dl	5.74	4.59	6.89	0.575	1.15	Biuret reaction, end point
	g/l	57.4	45.9	68.9	5.75	11.5	
PSA Total	ng/ml = µg/l	10.0	7.50	12.5	1.25	2.50	Roche Cobas e601/602
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.65	1.32	1.98	0.165	0.330	Roche Cobas e601/ 602
	µU/ml = mlU/l	1.63	1.30	1.96	0.165	0.330	Roche Elecsys
Total T3	ng/dl	153	115	191	19.0	38.0	Roche Cobas e601/ 602
	ng/ml	1.54	1.16	1.92	0.190	0.380	
	nmol/l	2.36	1.77	2.95	0.295	0.590	
Total T4	ng/ml	69.7	52.3	87.1	8.70	17.4	Roche Cobas e601/ 602
	nmol/l	89.3	67.0	112	11.4	22.7	
	µg/dl	6.97	5.23	8.71	0.870	1.74	
Urea	mg/dl	44.6	37.9	51.3	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	20.8	17.7	23.9	1.55	3.10	
	mmol/l	7.42	6.31	8.53	0.555	1.11	

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RANDOX

Roche Integra

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.15	3.53	4.77	0.310	0.620	Bromocresol Green
	g/l	41.5	35.3	47.7	3.10	6.20	
Alkaline Phosphatase	U/l	177	150	204	13.5	27.0	AMP optimised to IFCC
	U/l	179	152	206	13.5	27.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	56	48	64	4.00	8.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	80	68	92	6.00	12.0	BM/Roche, Colorimetric pNPG7
	U/l	80	68	92	6.00	12.0	Roche Integra 2-chloro-pNPG7
	U/l	80	68	92	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.21	0.956	1.46	0.125	0.250	Diazo With Sulphanilic Acid
	µmol/l	20.7	16.4	25.0	2.15	4.30	
	mg/dl	1.20	0.948	1.45	0.125	0.250	Dichlorophenyl Diazonium
	µmol/l	20.5	16.2	24.8	2.15	4.30	
	mg/dl	1.21	0.956	1.46	0.125	0.250	Roche DPD Doumas standardised
	µmol/l	20.6	16.3	24.9	2.15	4.30	
	mg/dl	1.21	0.956	1.46	0.125	0.250	Roche DPD JG standardised
	µmol/l	20.7	16.4	25.0	2.15	4.30	
Bilirubin Total	mg/dl	1.73	1.37	2.09	0.180	0.360	Diazo With Sulphanilic Acid
	µmol/l	29.5	23.3	35.7	3.10	6.20	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Diazonium Ion
	µmol/l	29.1	23.0	35.2	3.05	6.10	
	mg/dl	1.72	1.36	2.08	0.180	0.360	Dichlorophenyl Diazonium
	µmol/l	29.4	23.2	35.6	3.10	6.20	
Calcium	mg/dl	8.34	7.51	9.17	0.415	0.830	Arsenazo III
	mmol/l	2.08	1.87	2.29	0.105	0.210	
	mg/dl	8.46	7.61	9.31	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.11	1.90	2.32	0.105	0.210	
	mg/dl	8.46	7.61	9.31	0.425	0.850	NM-BAPTA
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Chloride	mmol/l	98.4	90.5	106	3.80	7.60	ISE Indirect
Cholesterol	mg/dl	150	131	169	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.89	3.38	4.40	0.255	0.510	
	mg/dl	150	131	169	9.50	19.0	Cholesterol Oxidase - IDMS
	mmol/l	3.88	3.38	4.38	0.250	0.500	
CK Total	U/l	197	162	232	17.5	35.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.36	1.09	1.63	0.135	0.270	Agappe - JAFFE'S KINETIC
	µmol/l	120	96.0	144	12.0	24.0	

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RANDOX

Roche Integra

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Creatinine	mg/dl	1.38	1.10	1.66	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	122	97.6	146	12.0	24.0	
	mg/dl	1.33	1.06	1.60	0.135	0.270	Jaffe Rate Blanked
	µmol/l	118	94.4	142	12.0	24.0	
	mg/dl	1.39	1.11	1.67	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.37	1.10	1.64	0.135	0.270	Jaffe rate comp. (-18umol/l)
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.39	1.11	1.67	0.140	0.280	Roche Creatinine Plus
	µmol/l	123	98.4	148	12.5	25.0	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.16	5.24	7.08	0.460	0.920	
	mg/dl	110	93.5	127	8.50	17.0	Hexokinase
	mmol/l	6.12	5.20	7.04	0.460	0.920	
HDL - Cholesterol	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL, Roche 4th gen.
	mmol/l	1.21	1.03	1.39	0.090	0.180	
Iron	µg/dl	110	90.2	130	10.0	20.0	Colorimetric with ppt.
	µmol/l	19.7	16.2	23.2	1.75	3.50	
	µg/dl	110	90.2	130	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.6	16.1	23.1	1.75	3.50	
Lactate	mg/dl	12.6	10.3	14.9	1.15	2.30	Colorimetric - Lactate oxidase
	mmol/l	1.40	1.15	1.65	0.125	0.250	
LD (LDH)	U/l	205	174	236	15.5	31.0	L to P, IFCC
	U/l	206	175	237	15.5	31.0	Lactate to Pyruvate methods
Lipase	U/l	35	28	42	3.50	7.00	Colorimetric Roche
Magnesium	mg/dl	2.35	2.07	2.63	0.140	0.280	Chlorphosphonazo III
	mmol/l	0.966	0.850	1.08	0.057	0.114	
	mg/dl	2.33	2.05	2.61	0.140	0.280	Xylidyl Blue
	mmol/l	0.960	0.845	1.08	0.060	0.120	
Phosphate Inorganic	mg/dl	5.18	4.40	5.96	0.390	0.780	Phosphomolybdate Enzymatic
	mmol/l	1.67	1.42	1.92	0.125	0.250	
	mg/dl	5.18	4.40	5.96	0.390	0.780	Phosphomolybdate UV
	mmol/l	1.67	1.42	1.92	0.125	0.250	
Potassium	mmol/l	3.83	3.52	4.14	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.51	4.41	6.61	0.550	1.10	Biuret reaction, end point
	g/l	55.1	44.1	66.1	5.50	11.0	

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Roche Integra

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Protein Total	g/dl	5.37	4.30	6.44	0.535	1.07	Biuret reaction, kinetic
	g/l	53.7	43.0	64.4	5.35	10.7	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µg/dl	232	183	281	24.5	49.0	FE+UIBC(saturation with iron)
	µmol/l	41.5	32.8	50.2	4.35	8.70	
Triglycerides	mg/dl	102	85.7	118	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.15	0.966	1.33	0.090	0.180	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
	mg/dl	102	85.7	118	8.00	16.0	Lipase/GPO-PAP, 0.11mmol/l correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
Urea	mg/dl	46.1	39.2	53.0	3.45	6.90	Urease, end point
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.67	6.52	8.82	0.575	1.15	
	mg/dl	45.0	38.3	51.7	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	21.0	17.9	24.1	1.55	3.10	
	mmol/l	7.49	6.37	8.61	0.560	1.12	
Uric Acid (Urate)	mg/dl	6.10	5.31	6.89	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.363	0.316	0.410	0.024	0.047	
	mg/dl	6.10	5.31	6.89	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.363	0.316	0.410	0.024	0.047	
	mg/dl	6.15	5.35	6.95	0.400	0.800	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.366	0.318	0.414	0.024	0.048	

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RANDOX

SEAC-Radim SEAC FP-20 Flame Photometer

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Potassium	mmol/l	3.78	3.48	4.08	0.150	0.300	Flame Photometry
Sodium	mmol/l	144	137	151	3.50	7.00	Flame Photometry

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RANDOX

Seamaty SD1

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.21	3.58	4.84	0.315	0.630	Bromocresol Green
	g/l	42.1	35.8	48.4	3.15	6.30	
Alkaline Phosphatase	U/l	171	145	197	13.0	26.0	AMP optimised to IFCC
Amylase Total	U/l	82	70	94	6.00	12.0	pNP Maltotrioside substrates
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.29	1.02	1.56	0.135	0.270	Oxidation to Biliverdin/Vanadate
	µmol/l	22.1	17.5	26.7	2.30	4.60	
Bilirubin Total	mg/dl	2.14	1.69	2.59	0.225	0.450	Oxidation to Biliverdin/Vanadate
	µmol/l	36.5	28.8	44.2	3.85	7.70	
gamma-GT	U/l	62	53	71	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
Lipase	U/l	49	39	59	5.00	10.0	Colorimetric Randox
Protein Total	g/dl	6.26	5.01	7.51	0.625	1.25	Biuret reaction, end point
	g/l	62.6	50.1	75.1	6.25	12.5	
Sodium	mmol/l	145	138	152	3.50	7.00	Ortho Vitros Microslide Systems

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RANDOX

Sekisui Semi-Automated Chemistry Analyser

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.98	3.46	4.50	0.260	0.520	
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.32	5.37	7.27	0.475	0.950	
Urea	mg/dl	50.7	43.1	58.3	3.80	7.60	Urease, kinetic
	mg/dl (BUN)	23.6	20.1	27.1	1.75	3.50	
	mmol/l	8.43	7.17	9.69	0.630	1.26	

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RANDOX

SensaCore Sensa Core ST Series Electrolyte Analysers

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium Ionised	mg/dl	4.09	3.68	4.50	0.205	0.410	Ion Selective Electrode
	mmol/l	1.02	0.918	1.12	0.050	0.100	
Chloride	mmol/l	99.7	91.7	108	4.15	8.30	ISE Indirect
Potassium	mmol/l	3.76	3.46	4.06	0.150	0.300	ISE method - indirect
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect

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RANDOX

SFRI Medical Diagnostics SFRI BSA 3000

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Glucose	mg/dl	116	98.6	133	8.50	17.0	Glucose Oxidase
	mmol/l	6.42	5.46	7.38	0.480	0.960	

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SFRI Medical Diagnostics SFRI ISE electrolyte series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium	mg/dl	8.90	8.01	9.79	0.445	0.890	Ion Selective Electrode
	mmol/l	2.22	2.00	2.44	0.110	0.220	
Calcium Ionised	mg/dl	4.69	4.22	5.16	0.235	0.470	Ion Selective Electrode
	mmol/l	1.17	1.05	1.29	0.060	0.120	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE Indirect

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RANDOX

Shenzhen Dymind Biotechnology Heto Medical AU240

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Cholesterol	mg/dl	151	131	171	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.92	3.41	4.43	0.255	0.510	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.96	3.45	4.47	0.255	0.510	
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.17	5.24	7.10	0.465	0.930	
Uric Acid (Urate)	mg/dl	6.03	5.25	6.81	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.359	0.312	0.406	0.024	0.047	

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RANDOX

Shenzhen Dymind Biotechnology
Shenzhen YHLO iFlash Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.41	1.06	1.76	0.175	0.350	Shenzhen YHLO iFlash Series
	pg/ml	14.1	10.6	17.6	1.75	3.50	
	pmol/l	18.1	13.6	22.6	2.25	4.50	
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.82	1.46	2.18	0.180	0.360	Shenzhen YHLO iFlash Series

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RANDOX

Siemens / Bayer

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Calcium Ionised	mg/dl	4.05	3.65	4.45	0.200	0.400	Ion Selective Electrode
	mmol/l	1.01	0.909	1.11	0.050	0.100	

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Siemens ADVIA Centaur CP

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.41	1.06	1.76	0.175	0.350	Siemens Centaur
	pg/ml	14.1	10.6	17.6	1.75	3.50	
	pmol/l	18.1	13.6	22.6	2.25	4.50	
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.42	1.14	1.70	0.140	0.280	Siemens Centaur
Total T3	ng/dl	129	96.8	161	16.0	32.0	Siemens Centaur
	ng/ml	1.30	0.975	1.63	0.165	0.330	
	nmol/l	1.99	1.49	2.49	0.250	0.500	

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Siemens ADVIA Centaur XP/XPT/ Classic

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.44	1.08	1.80	0.180	0.360	Siemens Centaur
	pg/ml	14.4	10.8	18.0	1.80	3.60	
	pmol/l	18.4	13.8	23.0	2.30	4.60	
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.41	1.13	1.69	0.140	0.280	Siemens Centaur
Total T4	ng/ml	70.0	52.5	87.5	8.75	17.5	Siemens Centaur
	nmol/l	89.8	67.4	112	11.1	22.2	
	µg/dl	7.00	5.25	8.75	0.875	1.75	

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RANDOX

Siemens ADVIA Chem (Non Reagent)

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.78	3.21	4.35	0.285	0.570	Bromocresol Green
	g/l	37.8	32.1	43.5	2.85	5.70	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Cholesterol	mg/dl	149	130	168	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.86	3.36	4.36	0.250	0.500	
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.09	5.18	7.00	0.455	0.910	
Protein Total	g/dl	5.60	4.48	6.72	0.560	1.12	Biuret reaction, end point
	g/l	56.0	44.8	67.2	5.60	11.2	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	

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Siemens ADVIA Chemistry Instruments

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.85	3.27	4.43	0.290	0.580	Bromocresol Green
	g/l	38.5	32.7	44.3	2.90	5.80	
Alkaline Phosphatase	U/l	168	143	193	12.5	25.0	AMP optimised to IFCC
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris Buffer Without P5P
Amylase Total	U/l	80	68	92	6.00	12.0	Siemens - blocked pNPG7
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Bile Acids	µmol/l	25.8	20.6	31.0	2.60	5.20	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.21	0.956	1.46	0.125	0.250	Oxidation to Biliverdin/Vanadate
	µmol/l	20.6	16.3	24.9	2.15	4.30	
Bilirubin Total	mg/dl	1.98	1.56	2.40	0.210	0.420	Oxidation to Biliverdin/Vanadate
	µmol/l	33.9	26.8	41.0	3.55	7.10	
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Chloride	mmol/l	99.7	91.7	108	4.15	8.30	ISE Indirect
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.97	3.45	4.49	0.260	0.520	
Cholinesterase	U/l	6638	5310	7966	664	1328	Colorimetric - Butyrylthiocholine
CK Total	U/l	194	159	229	17.5	35.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	128	102	154	13.0	26.0	
	mg/dl	1.47	1.18	1.76	0.145	0.290	Jaffe Rate Blanked
	µmol/l	130	104	156	13.0	26.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate comp. (-18umol/l)
	µmol/l	126	101	151	12.5	25.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	55	47	63	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.04	5.13	6.95	0.455	0.910	
	mg/dl	106	90.1	122	8.00	16.0	Hexokinase
	mmol/l	5.91	5.02	6.80	0.445	0.890	
HDL - Cholesterol	mg/dl	42.1	35.8	48.4	3.15	6.30	Direct HDL, Clearance method
	mmol/l	1.09	0.927	1.25	0.080	0.160	
	mg/dl	40.9	34.8	47.0	3.05	6.10	Direct HDL, Immunoseparation
	mmol/l	1.06	0.901	1.22	0.080	0.160	
	mg/dl	41.7	35.4	48.0	3.15	6.30	Direct HDL, PPD
	mmol/l	1.08	0.918	1.24	0.080	0.160	

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Siemens ADVIA Chemistry Instruments

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Iron	µg/dl	104	85.3	123	9.50	19.0	Colorimetric without ppt.
	µmol/l	18.6	15.3	21.9	1.65	3.30	
Lactate	mg/dl	11.5	9.43	13.6	1.05	2.10	Colorimetric - Lactate oxidase
	mmol/l	1.28	1.05	1.51	0.115	0.230	
LD (LDH)	U/l	201	171	231	15.0	30.0	L to P Siemens/Dade, non-IFCC
	U/l	198	168	228	15.0	30.0	L to P, IFCC
	U/l	200	170	230	15.0	30.0	Lactate to Pyruvate methods
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric
Lithium	mg/dl	0.674	0.593	0.755	0.041	0.081	Spectrophotometric
	mmol/l	0.970	0.854	1.09	0.060	0.120	
Magnesium	mg/dl	2.22	1.95	2.49	0.135	0.270	Xylidyl Blue
	mmol/l	0.914	0.804	1.02	0.053	0.106	
Phosphate Inorganic	mg/dl	5.11	4.34	5.88	0.385	0.770	Phosphomolybdate UV
	mmol/l	1.65	1.40	1.90	0.125	0.250	
Potassium	mmol/l	3.89	3.58	4.20	0.155	0.310	ISE method - indirect
Protein Total	g/dl	5.53	4.42	6.64	0.555	1.11	Biuret reaction, end point
	g/l	55.3	44.2	66.4	5.55	11.1	
	g/dl	5.47	4.38	6.56	0.545	1.09	Biuret reaction, kinetic
	g/l	54.7	43.8	65.6	5.45	10.9	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µg/dl	267	211	323	28.0	56.0	Direct Colorimetric
	µmol/l	47.7	37.7	57.7	5.00	10.0	
	µg/dl	253	200	306	26.5	53.0	FE+UIBC(saturation with iron)
	µmol/l	45.3	35.8	54.8	4.75	9.50	
Triglycerides	mg/dl	102	85.7	118	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.15	0.966	1.33	0.090	0.180	
Urea	mg/dl	48.2	41.0	55.4	3.60	7.20	Urease, kinetic
	mg/dl (BUN)	22.5	19.1	25.9	1.70	3.40	
	mmol/l	8.02	6.82	9.22	0.600	1.20	
Uric Acid (Urate)	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.362	0.315	0.409	0.024	0.047	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.362	0.315	0.409	0.024	0.047	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.362	0.315	0.409	0.024	0.047	

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RANDOX

Siemens Atellica Solution

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.93	3.34	4.52	0.295	0.590	Bromocresol Green
	g/l	39.3	33.4	45.2	2.95	5.90	
	g/dl	3.95	3.36	4.54	0.295	0.590	Bromocresol Purple
	g/l	39.5	33.6	45.4	2.95	5.90	
Alkaline Phosphatase	U/l	172	146	198	13.0	26.0	AMP optimised to IFCC
	U/l	170	145	195	12.5	25.0	Siemens/Dade Dimension AMP buffer
ALT (GPT)	U/l	43	34	52	4.50	9.00	Siemens/Dade standard nonIFCC correlated
	U/l	43	34	52	4.50	9.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	65	55	75	5.00	10.0	Immunoinhibition, EPS substrate
	U/l	65	55	75	5.00	10.0	Roche Liquid Stable pNPG7
Amylase Total	U/l	90	77	103	6.50	13.0	Siemens - blocked pNPG7
	U/l	86	73	99	6.50	13.0	Siemens/Dade Behring 2-chloro-pNPG3
AST (GOT)	U/l	38	30	46	4.00	8.00	Siemens/Dade standard non IFCC corr.
	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bile Acids	µmol/l	22.6	18.1	27.1	2.25	4.50	Enzymatic Colorimetric
	µmol/l	22.0	17.6	26.4	2.20	4.40	Enzymatic Colorimetric - Sentinel
Bilirubin Direct	mg/dl	1.22	0.964	1.48	0.130	0.260	Oxidation to Biliverdin/Vanadate
	µmol/l	20.8	16.4	25.2	2.20	4.40	
Bilirubin Total	mg/dl	1.99	1.57	2.41	0.210	0.420	Diazo With Sulphanilic Acid
	µmol/l	34.1	26.9	41.3	3.60	7.20	
	mg/dl	1.97	1.56	2.38	0.205	0.410	Oxidation to Biliverdin/Vanadate
	µmol/l	33.7	26.6	40.8	3.55	7.10	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
	mg/dl	8.30	7.47	9.13	0.415	0.830	Cresolphthalein Complexone
	mmol/l	2.07	1.86	2.28	0.105	0.210	
Chloride	mmol/l	102	93.8	110	4.00	8.00	ISE Indirect
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.97	3.45	4.49	0.260	0.520	
	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.96	3.45	4.47	0.255	0.510	
	mg/dl	151	131	171	10.0	20.0	Siemens Dimension
	mmol/l	3.92	3.41	4.43	0.255	0.510	
Cholinesterase	U/l	8149	6519	9779	815	1630	Colorimetric - Butyrylthiocholine
	U/l	8589	6871	10307	859	1718	Siemens Atellica Cholinesterase_2
CK Total	U/l	194	159	229	17.5	35.0	CK-NAC (IFCC)
	U/l	192	157	227	17.5	35.0	Creatine Phosphate Substrate Start

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RANDOX

Siemens Atellica Solution

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline Picrate With Deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	IDMS Traceable
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.41	1.13	1.69	0.140	0.280	Jaffe Rate Blanked
	µmol/l	125	100	150	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.39	1.11	1.67	0.140	0.280	Jaffe rate comp. (-18umol/l)
	µmol/l	123	98.4	148	12.5	25.0	
Free T4	ng/dl	1.40	1.05	1.75	0.175	0.350	Siemens Atellica IM
	pg/ml	14.0	10.5	17.5	1.75	3.50	
	pmol/l	18.0	13.5	22.5	2.25	4.50	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	60	51	69	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
	U/l	58	49	67	4.50	9.00	Siemens Dimension
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.10	5.19	7.01	0.455	0.910	
	mg/dl	107	91.0	123	8.00	16.0	Hexokinase
	mmol/l	5.92	5.03	6.81	0.445	0.890	
HDL - Cholesterol	mg/dl	54.1	46.0	62.2	4.05	8.10	Direct HDL, Clearance method
	mmol/l	1.40	1.19	1.61	0.105	0.210	
	mg/dl	54.4	46.2	62.6	4.10	8.20	Direct HDL, Immunoseparation
	mmol/l	1.41	1.20	1.62	0.105	0.210	
	mg/dl	52.9	45.0	60.8	3.95	7.90	Direct HDL, PEGME
	mmol/l	1.37	1.16	1.58	0.105	0.210	
	mg/dl	50.6	43.0	58.2	3.80	7.60	Direct HDL, PPD
	mmol/l	1.31	1.11	1.51	0.100	0.200	
	mg/dl	53.3	45.3	61.3	4.00	8.00	HDL Ultra/Accel Selective Detergent
	mmol/l	1.38	1.17	1.59	0.105	0.210	
Iron	µg/dl	106	86.9	125	9.50	19.0	Colorimetric with ppt.
	µmol/l	19.0	15.6	22.4	1.70	3.40	
	µg/dl	106	86.9	125	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.0	15.6	22.4	1.70	3.40	
Lactate	mg/dl	12.4	10.2	14.6	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.38	1.13	1.63	0.125	0.250	

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RANDOX

Siemens Atellica Solution

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
LD (LDH)	U/l	202	172	232	15.0	30.0	L to P Siemens/Dade, non-IFCC
	U/l	199	169	229	15.0	30.0	L to P, IFCC
	U/l	199	169	229	15.0	30.0	Lactate to Pyruvate methods
Lipase	U/l	40	32	48	4.00	8.00	Colorimetric Dimension (LIP Kit)
	U/l	40	32	48	4.00	8.00	Other Colorimetric
Lithium	mg/dl	0.681	0.599	0.763	0.041	0.082	Spectrophotometric
	mmol/l	0.980	0.862	1.10	0.060	0.120	
Magnesium	mg/dl	2.25	1.98	2.52	0.135	0.270	Methylthymol Blue
	mmol/l	0.926	0.815	1.04	0.057	0.114	
	mg/dl	2.26	1.99	2.53	0.135	0.270	Xylidyl Blue
	mmol/l	0.931	0.819	1.04	0.055	0.109	
Osmolality	mOsm/Kg	293	234	352	29.5	59.0	Calculated
Phosphate Inorganic	mg/dl	5.15	4.38	5.92	0.385	0.770	Phosphomolybdate UV
	mmol/l	1.66	1.41	1.91	0.125	0.250	
Potassium	mmol/l	3.77	3.47	4.07	0.150	0.300	ISE method - indirect
Protein Total	g/dl	5.66	4.53	6.79	0.565	1.13	Biuret reaction, end point
	g/l	56.6	45.3	67.9	5.65	11.3	
	g/dl	5.75	4.60	6.90	0.575	1.15	Biuret reaction, kinetic
	g/l	57.5	46.0	69.0	5.75	11.5	
PSA Total	ng/ml = µg/l	9.60	7.20	12.0	1.20	2.40	Siemens Atellica IM
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.33	1.06	1.60	0.135	0.270	Siemens Atellica IM
TIBC	µg/dl	266	210	322	28.0	56.0	Direct Colorimetric
	µmol/l	47.5	37.5	57.5	5.00	10.0	
	µg/dl	269	213	325	28.0	56.0	FE+UIBC(saturation with iron)
	µmol/l	48.1	38.0	58.2	5.05	10.1	
Total T4	ng/ml	75.3	56.5	94.1	9.40	18.8	Siemens Atellica IM
	nmol/l	96.5	72.4	121	12.3	24.5	
	µg/dl	7.53	5.65	9.41	0.940	1.88	
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/GK UV. no correction
	mmol/l	1.18	0.991	1.37	0.095	0.190	
	mg/dl	106	89.0	123	8.50	17.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.20	1.01	1.39	0.095	0.190	
	mg/dl	104	87.4	121	8.50	17.0	Lipase/GPO-PAP No Correction
	mmol/l	1.18	0.991	1.37	0.095	0.190	

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Siemens Atellica Solution

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Siemens Atellica IM
	mmol/l	1.18	0.991	1.37	0.095	0.190	
Urea	mg/dl	48.6	41.3	55.9	3.65	7.30	Urease - hypochlorite
	mg/dl (BUN)	22.6	19.2	26.0	1.70	3.40	
	mmol/l	8.08	6.87	9.29	0.605	1.21	
	mg/dl	48.5	41.2	55.8	3.65	7.30	Urease, end point
	mg/dl (BUN)	22.6	19.2	26.0	1.70	3.40	
	mmol/l	8.07	6.86	9.28	0.605	1.21	
	mg/dl	47.6	40.5	54.7	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.92	6.73	9.11	0.595	1.19	
Uric Acid (Urate)	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase @ 293 nm
	mmol/l	0.361	0.314	0.408	0.024	0.047	
	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.362	0.315	0.409	0.024	0.047	
	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase, catalase 340nm.
	mmol/l	0.364	0.317	0.411	0.024	0.047	

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Siemens AUTOPAK 300/300i analysers

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.12	3.50	4.74	0.310	0.620	Bromocresol Green
	g/l	41.2	35.0	47.4	3.10	6.20	
Protein Total	g/dl	5.60	4.48	6.72	0.560	1.12	Biuret reaction, end point
	g/l	56.0	44.8	67.2	5.60	11.2	
Urea	mg/dl	46.2	39.3	53.1	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.68	6.53	8.83	0.575	1.15	

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Siemens Dimension EXL/200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.11	3.49	4.73	0.310	0.620	Bromocresol Green
	g/l	41.1	34.9	47.3	3.10	6.20	
	g/dl	4.09	3.48	4.70	0.305	0.610	Bromocresol Purple
	g/l	40.9	34.8	47.0	3.05	6.10	
Alkaline Phosphatase	U/l	181	154	208	13.5	27.0	AMP optimised to IFCC
	U/l	179	152	206	13.5	27.0	Siemens/Dade Dimension AMP buffer
ALT (GPT)	U/l	46	37	55	4.50	9.00	Siemens/Dade standard nonIFCC correlated
	U/l	47	38	56	4.50	9.00	Tris Buffer With P5P
Amylase Total	U/l	82	70	94	6.00	12.0	Siemens - blocked pNPG7
	U/l	83	71	95	6.00	12.0	Siemens/Dade - maltopenta/hexaoside
	U/l	83	71	95	6.00	12.0	Siemens/Dade Behring 2-chloro-pNPG3
AST (GOT)	U/l	47	38	56	4.50	9.00	Siemens/Dade standard non IFCC corr.
	U/l	47	38	56	4.50	9.00	Tris Buffer With P5P
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
	mmol/l	13.9	11.0	16.8	1.45	2.90	PEP Carboxylase
Bilirubin Direct	mg/dl	0.825	0.652	0.998	0.087	0.173	Diazo With Sulphanilic Acid
	µmol/l	14.1	11.1	17.1	1.50	3.00	
	mg/dl	0.801	0.633	0.969	0.084	0.168	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	13.7	10.8	16.6	1.45	2.90	
Bilirubin Total	mg/dl	1.94	1.53	2.35	0.205	0.410	Diazo With Sulphanilic Acid
	µmol/l	33.1	26.1	40.1	3.50	7.00	
	mg/dl	1.91	1.51	2.31	0.200	0.400	Diazonium Ion
	µmol/l	32.7	25.8	39.6	3.45	6.90	
	mg/dl	1.91	1.51	2.31	0.200	0.400	Oxidation to Biliverdin/Vanadate
	µmol/l	32.6	25.8	39.4	3.40	6.80	
Calcium	mg/dl	8.38	7.54	9.22	0.420	0.840	Arsenazo III
	mmol/l	2.09	1.88	2.30	0.105	0.210	
	mg/dl	8.14	7.33	8.95	0.405	0.810	Cresolphthalein Complexone
	mmol/l	2.03	1.83	2.23	0.100	0.200	
Chloride	mmol/l	95.9	88.2	104	4.05	8.10	ISE Indirect
Cholesterol	mg/dl	140	122	158	9.00	18.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.63	3.16	4.10	0.235	0.470	
	mg/dl	139	121	157	9.00	18.0	Siemens Dimension
	mmol/l	3.61	3.14	4.08	0.235	0.470	
Cholinesterase	U/l	10258	8206	12310	1026	2052	Colorimetric - Butyrythiochol. Dimension
CK Total	U/l	195	160	230	17.5	35.0	CK-NAC (IFCC)
	U/l	188	154	222	17.0	34.0	Dithioerythritol (DTE), IFCC correlated
Creatinine	mg/dl	1.46	1.17	1.75	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	129	103	155	13.0	26.0	

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Siemens Dimension EXL/200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Creatinine	mg/dl	1.47	1.18	1.76	0.145	0.290	Alkaline Picrate With Deproteinisation
	µmol/l	130	104	156	13.0	26.0	
	mg/dl	1.47	1.18	1.76	0.145	0.290	IDMS Traceable
	µmol/l	130	104	156	13.0	26.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Jaffe Rate Blanked
	µmol/l	131	105	157	13.0	26.0	
Free T4	ng/dl	1.43	1.07	1.79	0.180	0.360	Siemens Dimension Exl LOCI
	pg/ml	14.3	10.7	17.9	1.80	3.60	
	pmol/l	18.3	13.7	22.9	2.30	4.60	
gamma-GT	U/l	66	56	76	5.00	10.0	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	74	63	85	5.50	11.0	Siemens Dimension
Glucose	mg/dl	112	95.2	129	8.50	17.0	Hexokinase
	mmol/l	6.19	5.26	7.12	0.465	0.930	
HDL - Cholesterol	mg/dl	50.2	42.7	57.7	3.75	7.50	Direct HDL, Clearance method
	mmol/l	1.30	1.11	1.49	0.095	0.190	
	mg/dl	52.5	44.6	60.4	3.95	7.90	Direct HDL, Immunoseparation
	mmol/l	1.36	1.16	1.56	0.100	0.200	
	mg/dl	50.6	43.0	58.2	3.80	7.60	Direct HDL, PEGME
	mmol/l	1.31	1.11	1.51	0.100	0.200	
	mg/dl	52.1	44.3	59.9	3.90	7.80	Direct HDL, PPD
	mmol/l	1.35	1.15	1.55	0.100	0.200	
	mg/dl	49.8	42.3	57.3	3.75	7.50	HDL Ultra/Accel Selective Detergent
	mmol/l	1.29	1.10	1.48	0.095	0.190	
Iron	µg/dl	100	82.0	118	9.00	18.0	Colorimetric with ppt.
	µmol/l	17.9	14.7	21.1	1.60	3.20	
	µg/dl	101	82.8	119	9.00	18.0	Colorimetric without ppt.
	µmol/l	18.0	14.8	21.2	1.60	3.20	
Lactate	mg/dl	11.9	9.76	14.0	1.05	2.10	UV-LDH
	mmol/l	1.32	1.08	1.56	0.120	0.240	
LD (LDH)	U/l	193	164	222	14.5	29.0	L to P Siemens/Dade, non-IFCC
	U/l	196	167	225	14.5	29.0	L to P, IFCC
	U/l	198	168	228	15.0	30.0	Lactate to Pyruvate methods
Lipase	U/l	38	30	46	4.00	8.00	Colorimetric Dimension (LIP Kit)
	U/l	37	30	44	3.50	7.00	Colorimetric Dimension (LIPL Kit)
Lithium	mg/dl	0.750	0.660	0.840	0.045	0.090	Atomic Absorption
	mmol/l	1.08	0.950	1.21	0.065	0.130	
Magnesium	mg/dl	2.30	2.02	2.58	0.140	0.280	Methylthymol Blue
	mmol/l	0.945	0.832	1.06	0.058	0.115	

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Siemens Dimension EXL/200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Osmolality	mOsm/Kg	285	228	342	28.5	57.0	Calculated
Phosphate Inorganic	mg/dl	5.24	4.45	6.03	0.395	0.790	Phosphomolybdate Enzymatic
	mmol/l	1.69	1.44	1.94	0.125	0.250	
	mg/dl	5.27	4.48	6.06	0.395	0.790	Phosphomolybdate UV
	mmol/l	1.70	1.45	1.95	0.125	0.250	
Potassium	mmol/l	3.79	3.49	4.09	0.150	0.300	ISE method - indirect
Protein Total	g/dl	5.84	4.67	7.01	0.585	1.17	Biuret reaction, end point
	g/l	58.4	46.7	70.1	5.85	11.7	
	g/dl	5.68	4.54	6.82	0.570	1.14	Biuret reaction, kinetic
	g/l	56.8	45.4	68.2	5.70	11.4	
PSA Total	ng/ml = µg/l	8.82	6.62	11.0	1.09	2.18	Siemens Dimension
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.36	1.09	1.63	0.135	0.270	Siemens Dimension Exl LOCI
TIBC	µg/dl	220	174	266	23.0	46.0	Direct Colorimetric
	µmol/l	39.4	31.1	47.7	4.15	8.30	
	µg/dl	216	171	261	22.5	45.0	FE+UIBC(saturation with iron)
	µmol/l	38.6	30.5	46.7	4.05	8.10	
	µg/dl	220	174	266	23.0	46.0	Removal Of Excess Free Iron
	µmol/l	39.4	31.1	47.7	4.15	8.30	
Triglycerides	mg/dl	93.8	78.8	109	7.60	15.2	Lipase/GK UV. no correction
	mmol/l	1.06	0.890	1.23	0.085	0.170	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/Glycerol Dehydrogenase
	mmol/l	1.07	0.899	1.24	0.085	0.170	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
	mg/dl	93.8	78.8	109	7.60	15.2	Siemens Dimension
	mmol/l	1.06	0.890	1.23	0.085	0.170	
Urea	mg/dl	46.2	39.3	53.1	3.45	6.90	Urease - hypochlorite
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.68	6.53	8.83	0.575	1.15	
	mg/dl	47.0	40.0	54.0	3.50	7.00	Urease, end point
	mg/dl (BUN)	21.9	18.6	25.2	1.65	3.30	
	mmol/l	7.82	6.65	8.99	0.585	1.17	

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RANDOX

Siemens Dimension EXL/200

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Urea	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.75	6.59	8.91	0.580	1.16	
Uric Acid (Urate)	mg/dl	6.10	5.31	6.89	0.395	0.790	Uricase @ 293 nm
	mmol/l	0.363	0.316	0.410	0.024	0.047	
	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.15	5.35	6.95	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.366	0.318	0.414	0.024	0.048	
	mg/dl	6.05	5.26	6.84	0.395	0.790	Uricase, catalase 340nm.
	mmol/l	0.360	0.313	0.407	0.024	0.047	

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RANDOX

Siemens Dimension RxL/Max/Xpand

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.05	3.44	4.66	0.305	0.610	Bromocresol Green
	g/l	40.5	34.4	46.6	3.05	6.10	
	g/dl	4.09	3.48	4.70	0.305	0.610	Bromocresol Purple
	g/l	40.9	34.8	47.0	3.05	6.10	
Alkaline Phosphatase	U/l	179	152	206	13.5	27.0	AMP optimised to IFCC
	U/l	178	151	205	13.5	27.0	Siemens/Dade Dimension AMP buffer
ALT (GPT)	U/l	46	37	55	4.50	9.00	Siemens/Dade standard nonIFCC correlated
	U/l	47	38	56	4.50	9.00	Tris Buffer With P5P
Amylase Pancreatic	U/l	55	47	63	4.00	8.00	Immunoinhibition, EPS substrate
Amylase Total	U/l	83	71	95	6.00	12.0	Siemens/Dade Behring 2-chloro-pNPG3
AST (GOT)	U/l	47	38	56	4.50	9.00	Siemens/Dade standard non IFCC corr.
	U/l	48	38	58	5.00	10.0	Tris Buffer With P5P
Bicarbonate	mmol/l	14.8	11.7	17.9	1.55	3.10	Enzymatic
Bilirubin Direct	mg/dl	0.796	0.629	0.963	0.084	0.167	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	13.6	10.7	16.5	1.45	2.90	
Bilirubin Total	mg/dl	1.93	1.52	2.34	0.205	0.410	Diazo With Sulphanilic Acid
	µmol/l	33.0	26.1	39.9	3.45	6.90	
Calcium	mg/dl	8.30	7.47	9.13	0.415	0.830	Cresolphthalein Complexone
	mmol/l	2.07	1.86	2.28	0.105	0.210	
Chloride	mmol/l	95.9	88.2	104	4.05	8.10	ISE Indirect
Cholesterol	mg/dl	139	121	157	9.00	18.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.61	3.14	4.08	0.235	0.470	
	mg/dl	138	120	156	9.00	18.0	Siemens Dimension
	mmol/l	3.58	3.11	4.05	0.235	0.470	
Cholinesterase	U/l	10333	8266	12400	1034	2067	Colorimetric - Butyrythiochol. Dimension
CK Total	U/l	198	162	234	18.0	36.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.46	1.17	1.75	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	129	103	155	13.0	26.0	
	mg/dl	1.46	1.17	1.75	0.145	0.290	IDMS Traceable
	µmol/l	129	103	155	13.0	26.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe Rate Blanked
	µmol/l	126	101	151	12.5	25.0	
gamma-GT	U/l	65	55	75	5.00	10.0	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	72	61	83	5.50	11.0	Siemens Dimension
Glucose	mg/dl	112	95.2	129	8.50	17.0	Hexokinase
	mmol/l	6.23	5.30	7.16	0.465	0.930	
HDL - Cholesterol	mg/dl	51.0	43.4	58.6	3.80	7.60	Direct HDL, PEGME
	mmol/l	1.32	1.12	1.52	0.100	0.200	

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RANDOX

Siemens Dimension RxL/Max/Xpand

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
HDL - Cholesterol	mg/dl	51.4	43.7	59.1	3.85	7.70	Direct HDL, PPD
	mmol/l	1.33	1.13	1.53	0.100	0.200	
Iron	µg/dl	101	82.8	119	9.00	18.0	Colorimetric with ppt.
	µmol/l	18.0	14.8	21.2	1.60	3.20	
	µg/dl	102	83.6	120	9.00	18.0	Colorimetric without ppt.
	µmol/l	18.2	14.9	21.5	1.65	3.30	
Lactate	mg/dl	12.5	10.3	14.7	1.10	2.20	UV-LDH
	mmol/l	1.39	1.14	1.64	0.125	0.250	
LD (LDH)	U/l	192	163	221	14.5	29.0	L to P Siemens/Dade, non-IFCC
	U/l	197	167	227	15.0	30.0	L to P, IFCC
Lipase	U/l	39	31	47	4.00	8.00	Colorimetric Dimension (LIP Kit)
	U/l	37	30	44	3.50	7.00	Colorimetric Dimension (LIPL Kit)
	U/l	39	31	47	4.00	8.00	Other Colorimetric
Magnesium	mg/dl	2.33	2.05	2.61	0.140	0.280	Methylthymol Blue
	mmol/l	0.960	0.845	1.08	0.060	0.120	
Phosphate Inorganic	mg/dl	5.33	4.53	6.13	0.400	0.800	Phosphomolybdate Enzymatic
	mmol/l	1.72	1.46	1.98	0.130	0.260	
	mg/dl	5.27	4.48	6.06	0.395	0.790	Phosphomolybdate UV
	mmol/l	1.70	1.45	1.95	0.125	0.250	
Potassium	mmol/l	3.79	3.49	4.09	0.150	0.300	ISE method - indirect
Protein Total	g/dl	5.84	4.67	7.01	0.585	1.17	Biuret reaction, end point
	g/l	58.4	46.7	70.1	5.85	11.7	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µg/dl	224	177	271	23.5	47.0	Direct Colorimetric
	µmol/l	40.0	31.6	48.4	4.20	8.40	
	µg/dl	217	171	263	23.0	46.0	FE+UIBC(saturation with iron)
	µmol/l	38.8	30.7	46.9	4.05	8.10	
	µg/dl	231	182	280	24.5	49.0	Removal Of Excess Free Iron
	µmol/l	41.3	32.6	50.0	4.35	8.70	
Triglycerides	mg/dl	92.9	78.0	108	7.55	15.1	Lipase/GK UV. no correction
	mmol/l	1.05	0.882	1.22	0.085	0.170	
	mg/dl	92.9	78.0	108	7.55	15.1	Lipase/Glycerol Dehydrogenase
	mmol/l	1.05	0.882	1.22	0.085	0.170	
	mg/dl	92.0	77.3	107	7.50	15.0	Lipase/GPO-PAP No Correction
	mmol/l	1.04	0.874	1.21	0.085	0.170	
	mg/dl	95.6	80.3	111	7.70	15.4	Siemens Dimension
	mmol/l	1.08	0.907	1.25	0.085	0.170	

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RANDOX

Siemens Dimension RxL/Max/Xpand

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Urea	mg/dl	47.5	40.4	54.6	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.1	18.8	25.4	1.65	3.30	
	mmol/l	7.90	6.72	9.08	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase @ 293 nm
	mmol/l	0.362	0.315	0.409	0.024	0.047	
	mg/dl	6.20	5.39	7.01	0.405	0.810	Uricase perox. no ascorb. ox.
	mmol/l	0.369	0.321	0.417	0.024	0.048	
	mg/dl	6.08	5.29	6.87	0.395	0.790	Uricase, catalase 340nm.
	mmol/l	0.362	0.315	0.409	0.024	0.047	

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RANDOX

Siemens Immulite 1000

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.47	1.10	1.84	0.185	0.370	Siemens/DPC Immulite 1000
	pg/ml	14.7	11.0	18.4	1.85	3.70	
	pmol/l	18.8	14.1	23.5	2.35	4.70	
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.53	1.22	1.84	0.155	0.310	Siemens/DPC Immulite 1000

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RANDOX

Siemens Immulite 2000/Xpi

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.61	1.21	2.01	0.200	0.400	Siemens/DPC Immulite 2000/2500
	pg/ml	16.1	12.1	20.1	2.00	4.00	
	pmol/l	20.7	15.5	25.9	2.60	5.20	
PSA Total	ng/ml = µg/l	8.87	6.65	11.1	1.12	2.23	Siemens Immulite 2000/2500, Total PSA
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.47	1.18	1.76	0.145	0.290	Siemens/DPC Immulite 2000/2500

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SNIBE Biossays/BC Analysers

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.96	3.37	4.55	0.295	0.590	Bromocresol Green
	g/l	39.6	33.7	45.5	2.95	5.90	
Alkaline Phosphatase	U/l	193	164	222	14.5	29.0	AMP optimised to IFCC
alpha - HBDH	U/l	213	168	258	22.5	45.0	Oxobutyrate < 10 mmol/l
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	77	65	89	6.00	12.0	Randox Liquid Ethylidene pNPG7
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bile Acids	µmol/l	25.3	20.2	30.4	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.19	0.940	1.44	0.125	0.250	Oxidation to Biliverdin/Vanadate
	µmol/l	20.3	16.0	24.6	2.15	4.30	
Bilirubin Total	mg/dl	2.06	1.63	2.49	0.215	0.430	Oxidation to Biliverdin/Vanadate
	µmol/l	35.2	27.8	42.6	3.70	7.40	
Calcium	mg/dl	8.30	7.47	9.13	0.415	0.830	Arsenazo III
	mmol/l	2.07	1.86	2.28	0.105	0.210	
	mg/dl	8.38	7.54	9.22	0.420	0.840	Cresolphthalein Complexone
	mmol/l	2.09	1.88	2.30	0.105	0.210	
Calcium Ionised	mg/dl	4.00	3.60	4.40	0.200	0.400	Ion Selective Electrode
	mmol/l	0.997	0.897	1.10	0.052	0.103	
Cholesterol	mg/dl	158	137	179	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.08	3.55	4.61	0.265	0.530	
Cholinesterase	U/l	5764	4611	6917	577	1153	Colorimetric - Butyrylthiocholine
CK Total	U/l	222	182	262	20.0	40.0	CK-NAC substrate start (DGKC)
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	113	96.1	130	8.50	17.0	Hexokinase
	mmol/l	6.29	5.35	7.23	0.470	0.940	
HDL - Cholesterol	mg/dl	49.8	42.3	57.3	3.75	7.50	Direct HDL, PPD
	mmol/l	1.29	1.10	1.48	0.095	0.190	
Iron	µg/dl	98.4	80.7	116	8.80	17.6	Colorimetric without ppt.
	µmol/l	17.6	14.4	20.8	1.60	3.20	
Lactate	mg/dl	12.3	10.1	14.5	1.10	2.20	Colorimetric - Lactate oxidase
	mmol/l	1.37	1.12	1.62	0.125	0.250	
LD (LDH)	U/l	205	174	236	15.5	31.0	L to P, IFCC
Magnesium	mg/dl	2.25	1.98	2.52	0.135	0.270	Xylidyl Blue
	mmol/l	0.925	0.814	1.04	0.058	0.115	
Phosphate Inorganic	mg/dl	4.99	4.24	5.74	0.375	0.750	Phosphomolybdate UV
	mmol/l	1.61	1.37	1.85	0.120	0.240	
Protein Total	g/dl	5.72	4.58	6.86	0.570	1.14	Biuret reaction, end point
	g/l	57.2	45.8	68.6	5.70	11.4	

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SNIBE Biossays/BC Analysers

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
TIBC	µg/dl	235	186	284	24.5	49.0	FE+UIBC(saturation with iron)
	µmol/l	42.0	33.2	50.8	4.40	8.80	
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.18	0.991	1.37	0.095	0.190	
	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	47.3	40.2	54.4	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.0	18.7	25.3	1.65	3.30	
	mmol/l	7.87	6.69	9.05	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.10	5.31	6.89	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.363	0.316	0.410	0.024	0.047	
	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.364	0.317	0.411	0.024	0.047	

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RANDOX

Spectrophotometer

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Cholesterol	mg/dl	149	130	168	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.87	3.37	4.37	0.250	0.500	
Creatinine	mg/dl	1.28	1.02	1.54	0.130	0.260	Jaffe Rate Blanked
	µmol/l	113	90.4	136	11.5	23.0	
Glucose	mg/dl	106	90.1	122	8.00	16.0	Glucose Oxidase
	mmol/l	5.87	4.99	6.75	0.440	0.880	
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/GPO-PAP No Correction
	mmol/l	1.17	0.983	1.36	0.095	0.190	
Urea	mg/dl	47.9	40.7	55.1	3.60	7.20	Urease, end point
	mg/dl (BUN)	22.3	19.0	25.6	1.65	3.30	
	mmol/l	7.97	6.77	9.17	0.600	1.20	
Uric Acid (Urate)	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.361	0.314	0.408	0.024	0.047	

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SPINREACT Spin 120/200E/640/ Tech240

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.08	3.47	4.69	0.305	0.610	Bromocresol Green
	g/l	40.8	34.7	46.9	3.05	6.10	
Alkaline Phosphatase	U/l	254	216	292	19.0	38.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Calcium	mg/dl	8.66	7.79	9.53	0.435	0.870	Arsenazo III
	mmol/l	2.16	1.94	2.38	0.110	0.220	
Cholesterol	mg/dl	151	131	171	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.90	3.39	4.41	0.255	0.510	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.14	5.22	7.06	0.460	0.920	
HDL - Cholesterol	mg/dl	44.4	37.7	51.1	3.35	6.70	Direct HDL, Clearance method
	mmol/l	1.15	0.978	1.32	0.085	0.170	
Iron	µg/dl	119	97.6	140	10.5	21.0	Colorimetric without ppt.
	µmol/l	21.3	17.5	25.1	1.90	3.80	
Magnesium	mg/dl	2.41	2.12	2.70	0.145	0.290	Xylidyl Blue
	mmol/l	0.990	0.871	1.11	0.060	0.120	
Phosphate Inorganic	mg/dl	5.42	4.61	6.23	0.405	0.810	Phosphomolybdate UV
	mmol/l	1.75	1.49	2.01	0.130	0.260	
Protein Total	g/dl	5.76	4.61	6.91	0.575	1.15	Biuret reaction, end point
	g/l	57.6	46.1	69.1	5.75	11.5	
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/GPO-PAP No Correction
	mmol/l	1.17	0.983	1.36	0.095	0.190	
Urea	mg/dl	46.8	39.8	53.8	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.78	6.61	8.95	0.585	1.17	
Uric Acid (Urate)	mg/dl	6.86	5.97	7.75	0.445	0.890	Uricase Perox. with ascorb. ox
	mmol/l	0.408	0.355	0.461	0.027	0.053	

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RANDOX

SYNCHRON CX4/5/7/9/LX20/DXC

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	ng/dl	1.37	1.03	1.71	0.170	0.340	Beckman DxI 600/800
	pg/ml	13.7	10.3	17.1	1.70	3.40	
	pmol/l	17.6	13.2	22.0	2.20	4.40	
PSA Total	ng/ml = µg/l	11.2	8.40	14.0	1.40	2.80	Beckman DXI standardised to Hybritech
Thyroid Stimulating Hormone	µU/ml = mlU/l	1.37	1.10	1.64	0.135	0.270	Beckman DXI600/800/ Access 2 (3rd IS)

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RANDOX

Sysmex BX-3010/4000

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.98	3.38	4.58	0.300	0.600	Bromocresol Green
	g/l	39.8	33.8	45.8	3.00	6.00	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.13	0.893	1.37	0.120	0.240	Diazo with Dichloroanaline
	µmol/l	19.3	15.2	23.4	2.05	4.10	
	mg/dl	1.09	0.861	1.32	0.115	0.230	Diazo With Sulphanilic Acid
	µmol/l	18.7	14.8	22.6	1.95	3.90	
Bilirubin Total	mg/dl	1.77	1.40	2.14	0.185	0.370	Diazo With Dichloroaniline
	µmol/l	30.2	23.9	36.5	3.15	6.30	
	mg/dl	1.90	1.50	2.30	0.200	0.400	Diazo With Sulphanilic Acid
	µmol/l	32.4	25.6	39.2	3.40	6.80	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	Arsenazo III
	mmol/l	2.13	1.92	2.34	0.105	0.210	
	mg/dl	8.94	8.05	9.83	0.445	0.890	Phosphonazo
	mmol/l	2.23	2.01	2.45	0.110	0.220	
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.98	3.46	4.50	0.260	0.520	
Creatinine	mg/dl	1.56	1.25	1.87	0.155	0.310	Alkaline picrate no deproteinisation
	µmol/l	138	110	166	14.0	28.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Jaffe Rate Blanked
	µmol/l	127	102	152	12.5	25.0	
gamma-GT	U/l	61	52	70	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	113	96.1	130	8.50	17.0	Glucose Oxidase
	mmol/l	6.26	5.32	7.20	0.470	0.940	
	mg/dl	110	93.5	127	8.50	17.0	Hexokinase
	mmol/l	6.12	5.20	7.04	0.460	0.920	
HDL - Cholesterol	mg/dl	50.2	42.7	57.7	3.75	7.50	Direct HDL, Immunoseparation
	mmol/l	1.30	1.11	1.49	0.095	0.190	
Phosphate Inorganic	mg/dl	4.87	4.14	5.60	0.365	0.730	Phosphomolybdate UV
	mmol/l	1.57	1.33	1.81	0.120	0.240	
Protein Total	g/dl	5.70	4.56	6.84	0.570	1.14	Biuret reaction, end point
	g/l	57.0	45.6	68.4	5.70	11.4	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	46.5	39.5	53.5	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.73	6.57	8.89	0.580	1.16	

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RANDOX

Sysmex BX-3010/4000

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mg/dl	5.97	5.19	6.75	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.355	0.309	0.401	0.023	0.046	
	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.361	0.314	0.408	0.024	0.047	
	mg/dl	5.98	5.20	6.76	0.390	0.780	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.356	0.310	0.402	0.023	0.046	

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RANDOX

Teco Coatron Matrix

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.87	3.29	4.45	0.290	0.580	Bromocresol Green
	g/l	38.7	32.9	44.5	2.90	5.80	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.15	0.909	1.39	0.120	0.240	Diazo With Sulphanilic Acid
	µmol/l	19.6	15.5	23.7	2.05	4.10	
Bilirubin Total	mg/dl	1.93	1.52	2.34	0.205	0.410	Diazo With Sulphanilic Acid
	µmol/l	33.0	26.1	39.9	3.45	6.90	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	Arsenazo III
	mmol/l	2.13	1.92	2.34	0.105	0.210	
	mg/dl	8.42	7.58	9.26	0.420	0.840	Cresolphthalein Complexone
	mmol/l	2.10	1.89	2.31	0.105	0.210	
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.99	3.47	4.51	0.260	0.520	
Creatinine	mg/dl	1.39	1.11	1.67	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.38	1.10	1.66	0.140	0.280	Jaffe Rate Blanked
	µmol/l	122	97.6	146	12.0	24.0	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.15	5.23	7.07	0.460	0.920	
HDL - Cholesterol	mg/dl	45.6	38.8	52.4	3.40	6.80	Direct HDL, Clearance method
	mmol/l	1.18	1.00	1.36	0.090	0.180	
Protein Total	g/dl	5.68	4.54	6.82	0.570	1.14	Biuret reaction, end point
	g/l	56.8	45.4	68.2	5.70	11.4	
Triglycerides	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	46.0	39.1	52.9	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.65	6.50	8.80	0.575	1.15	
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.15	5.35	6.95	0.400	0.800	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.366	0.318	0.414	0.024	0.048	

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RANDOX

Teco TC-84/-3300

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.00	3.48	4.52	0.260	0.520	

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Thermo Fisher Scientific Konelab 20/30/60/Indiko

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml | **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.84	3.26	4.42	0.290	0.580	Bromocresol Green
	g/l	38.4	32.6	44.2	2.90	5.80	
Alkaline Phosphatase	U/l	182	155	209	13.5	27.0	AMP optimised to IFCC
	U/l	179	152	206	13.5	27.0	Colorimetric
ALT (GPT)	U/l	43	34	52	4.50	9.00	Colorimetric
	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	84	71	97	6.50	13.0	Human CNPG3 (IFCC)
AST (GOT)	U/l	37	30	44	3.50	7.00	Colorimetric
	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
	mmol/l	14.3	11.3	17.3	1.50	3.00	PEP Carboxylase
Bilirubin Direct	mg/dl	1.02	0.806	1.23	0.105	0.210	Diazo with Dichloroanaline
	µmol/l	17.4	13.7	21.1	1.85	3.70	
	mg/dl	1.05	0.830	1.27	0.110	0.220	Diazo With Sulphanilic Acid
	µmol/l	17.9	14.1	21.7	1.90	3.80	
Bilirubin Total	mg/dl	1.68	1.33	2.03	0.175	0.350	Diazo With Sulphanilic Acid
	µmol/l	28.7	22.7	34.7	3.00	6.00	
	mg/dl	1.73	1.37	2.09	0.180	0.360	Nitrobenzenediazonium Salt
	µmol/l	29.5	23.3	35.7	3.10	6.20	
Calcium	mg/dl	8.66	7.79	9.53	0.435	0.870	Arsenazo III
	mmol/l	2.16	1.94	2.38	0.110	0.220	
	mg/dl	8.74	7.87	9.61	0.435	0.870	Cresolphthalein Complexone
	mmol/l	2.18	1.96	2.40	0.110	0.220	
Chloride	mmol/l	104	95.7	112	4.00	8.00	ISE Indirect
Cholesterol	mg/dl	153	133	173	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.95	3.44	4.46	0.255	0.510	
	mg/dl	155	135	175	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	4.02	3.50	4.54	0.260	0.520	
CK Total	U/l	202	166	238	18.0	36.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.47	1.18	1.76	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	130	104	156	13.0	26.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe Rate Blanked
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	126	101	151	12.5	25.0	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	59	50	68	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	109	92.7	125	8.00	16.0	Glucose Oxidase
	mmol/l	6.03	5.13	6.93	0.450	0.900	

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Thermo Fisher Scientific Konelab 20/30/60/Indiko

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Glucose	mg/dl	111	94.4	128	8.50	17.0	Hexokinase
	mmol/l	6.14	5.22	7.06	0.460	0.920	
HDL - Cholesterol	mg/dl	45.9	39.0	52.8	3.45	6.90	Direct HDL, Clearance method
	mmol/l	1.19	1.01	1.37	0.090	0.180	
	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL, PEGME
	mmol/l	1.21	1.03	1.39	0.090	0.180	
	mg/dl	45.6	38.8	52.4	3.40	6.80	Direct HDL, PPD
	mmol/l	1.18	1.00	1.36	0.090	0.180	
Iron	µg/dl	117	95.9	138	10.5	21.0	Colorimetric with ppt.
	µmol/l	20.9	17.1	24.7	1.90	3.80	
	µg/dl	116	95.1	137	10.5	21.0	Colorimetric without ppt.
	µmol/l	20.7	17.0	24.4	1.85	3.70	
LD (LDH)	U/l	205	174	236	15.5	31.0	L to P, IFCC
Magnesium	mg/dl	2.31	2.03	2.59	0.140	0.280	Xylidyl Blue
	mmol/l	0.950	0.836	1.06	0.055	0.110	
Phosphate Inorganic	mg/dl	4.90	4.17	5.63	0.365	0.730	Phosphomolybdate Enzymatic
	mmol/l	1.58	1.34	1.82	0.120	0.240	
	mg/dl	5.08	4.32	5.84	0.380	0.760	Phosphomolybdate UV
	mmol/l	1.64	1.39	1.89	0.125	0.250	
Potassium	mmol/l	3.81	3.51	4.11	0.150	0.300	ISE method - indirect
Protein Total	g/dl	5.67	4.54	6.80	0.565	1.13	Biuret reaction, end point
	g/l	56.7	45.4	68.0	5.65	11.3	
	g/dl	5.70	4.56	6.84	0.570	1.14	Biuret reaction, kinetic
	g/l	57.0	45.6	68.4	5.70	11.4	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/Glycerol Dehydrogenase
	mmol/l	1.13	0.949	1.31	0.090	0.180	
	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
Urea	mg/dl	48.6	41.3	55.9	3.65	7.30	Urease, end point
	mg/dl (BUN)	22.7	19.3	26.1	1.70	3.40	
	mmol/l	8.09	6.88	9.30	0.605	1.21	
	mg/dl	47.4	40.3	54.5	3.55	7.10	Urease, kinetic
	mg/dl (BUN)	22.1	18.8	25.4	1.65	3.30	
	mmol/l	7.88	6.70	9.06	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase perox. no ascorb. ox.
	mmol/l	0.361	0.314	0.408	0.024	0.047	

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Thermo Fisher Scientific Konelab 20/30/60/Indiko

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase Perox. with ascorb. ox
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.05	5.26	6.84	0.395	0.790	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.360	0.313	0.407	0.024	0.047	

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RANDOX

Tokyo-Boeki Biolis / Prestige 24i / TMS 1024

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.99	3.39	4.59	0.300	0.600	Bromocresol Green
	g/l	39.9	33.9	45.9	3.00	6.00	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.03	3.51	4.55	0.260	0.520	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	113	96.1	130	8.50	17.0	Glucose Oxidase
	mmol/l	6.25	5.31	7.19	0.470	0.940	
Protein Total	g/dl	5.77	4.62	6.92	0.575	1.15	Biuret reaction, end point
	g/l	57.7	46.2	69.2	5.75	11.5	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	46.0	39.1	52.9	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	
	mmol/l	7.65	6.50	8.80	0.575	1.15	

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Tokyo-Boeki Biolis 50i

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.96	3.37	4.55	0.295	0.590	Bromocresol Green
	g/l	39.6	33.7	45.5	2.95	5.90	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.18	0.932	1.43	0.125	0.250	Diazo with Dichloroanaline
	µmol/l	20.1	15.9	24.3	2.10	4.20	
	mg/dl	1.12	0.885	1.36	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.1	15.1	23.1	2.00	4.00	
Bilirubin Total	mg/dl	1.90	1.50	2.30	0.200	0.400	Diazo With Dichloroaniline
	µmol/l	32.5	25.7	39.3	3.40	6.80	
	mg/dl	1.85	1.46	2.24	0.195	0.390	Diazo With Sulphanilic Acid
	µmol/l	31.7	25.0	38.4	3.35	6.70	
	mg/dl	1.94	1.53	2.35	0.205	0.410	Dichlorophenyl Diazonium
	µmol/l	33.2	26.2	40.2	3.50	7.00	
Calcium	mg/dl	8.30	7.47	9.13	0.415	0.830	Arsenazo III
	mmol/l	2.07	1.86	2.28	0.105	0.210	
Cholesterol	mg/dl	155	135	175	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.02	3.50	4.54	0.260	0.520	
CK Total	U/l	208	171	245	18.5	37.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Alkaline picrate no deproteinisation
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe Rate Blanked
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.47	1.18	1.76	0.145	0.290	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	130	104	156	13.0	26.0	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
	U/l	56	48	64	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	111	94.4	128	8.50	17.0	Glucose Oxidase
	mmol/l	6.15	5.23	7.07	0.460	0.920	
	mg/dl	110	93.5	127	8.50	17.0	Hexokinase
	mmol/l	6.11	5.19	7.03	0.460	0.920	
HDL - Cholesterol	mg/dl	44.8	38.1	51.5	3.35	6.70	Direct HDL, Immunoseparation
	mmol/l	1.16	0.986	1.33	0.085	0.170	
Iron	µg/dl	114	93.5	135	10.5	21.0	Colorimetric without ppt.
	µmol/l	20.4	16.7	24.1	1.85	3.70	
Protein Total	g/dl	5.69	4.55	6.83	0.570	1.14	Biuret reaction, end point
	g/l	56.9	45.5	68.3	5.70	11.4	
Triglycerides	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP No Correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	

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RANDOX

Tokyo-Boeki Biolis 50i

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Urea	mg/dl	45.8	38.9	52.7	3.45	6.90	Urease, kinetic
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
	mmol/l	7.62	6.48	8.76	0.570	1.14	
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	mg/dl	6.07	5.28	6.86	0.395	0.790	Uricase Perox. with ascorb. ox
	mmol/l	0.361	0.314	0.408	0.024	0.047	
	mg/dl	5.95	5.18	6.72	0.385	0.770	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.354	0.308	0.400	0.023	0.046	

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Tokyo-Boeki Biolis i30

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	High	1SD	2SD	Method
Albumin	g/dl	4.14	3.52	4.76	0.310	0.620	Agappe - Bromocresol Green
	g/l	41.4	35.2	47.6	3.10	6.20	
	g/dl	4.09	3.48	4.70	0.305	0.610	Bromocresol Green
	g/l	40.9	34.8	47.0	3.05	6.10	
Alkaline Phosphatase	U/l	240	204	276	18.0	36.0	Agappe- Kinetic method IFCC
	U/l	286	243	329	21.5	43.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	39	31	47	4.00	8.00	Agappe - IFCC
	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	78	66	90	6.00	12.0	Agappe - CNPG3
AST (GOT)	U/l	34	27	41	3.50	7.00	Agappe - IFCC
	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	0.649	0.513	0.785	0.068	0.136	Agappe - DIAZO
	µmol/l	11.1	8.77	13.4	1.15	2.30	
Bilirubin Total	mg/dl	1.66	1.31	2.01	0.175	0.350	Agappe - TAB
	µmol/l	28.4	22.4	34.4	3.00	6.00	
	mg/dl	1.83	1.45	2.21	0.190	0.380	Dichlorophenyl Diazonium
	µmol/l	31.3	24.7	37.9	3.30	6.60	
Calcium	mg/dl	8.74	7.87	9.61	0.435	0.870	Agappe - ARSENAZO
	mmol/l	2.18	1.96	2.40	0.110	0.220	
	mg/dl	8.38	7.54	9.22	0.420	0.840	Arsenazo III
	mmol/l	2.09	1.88	2.30	0.105	0.210	
Chloride	mmol/l	102	93.8	110	4.00	8.00	Agappe - THIOCYANATE
Cholesterol	mg/dl	145	126	164	9.50	19.0	Agappe - CHOD-PAP
	mmol/l	3.76	3.27	4.25	0.245	0.490	
	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.99	3.47	4.51	0.260	0.520	
CK Total	U/l	207	170	244	18.5	37.0	Gel Agglutination
Creatinine	mg/dl	1.54	1.23	1.85	0.155	0.310	Agappe - JAFFE'S KINETIC
	µmol/l	136	109	163	13.5	27.0	
	mg/dl	1.47	1.18	1.76	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	130	104	156	13.0	26.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Jaffe Rate Blanked
	µmol/l	127	102	152	12.5	25.0	
gamma-GT	U/l	62	53	71	4.50	9.00	Agappe - SZASZ KINETIC
	U/l	59	50	68	4.50	9.00	Gamma glut.-3-carb.-4-nitro.
Glucose	mg/dl	110	93.5	127	8.50	17.0	Agappe - GOD-PAP
	mmol/l	6.12	5.20	7.04	0.460	0.920	
	mg/dl	112	95.2	129	8.50	17.0	Glucose Oxidase
	mmol/l	6.20	5.27	7.13	0.465	0.930	

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Tokyo-Boeki Biolis i30

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Glucose	mg/dl	110	93.5	127	8.50	17.0	Hexokinase
	mmol/l	6.11	5.19	7.03	0.460	0.920	
HDL - Cholesterol	mg/dl	47.5	40.4	54.6	3.55	7.10	Agappe - SELECTIVE INHIBITION
	mmol/l	1.23	1.05	1.41	0.090	0.180	
	mg/dl	43.2	36.7	49.7	3.25	6.50	Direct HDL, Clearance method
	mmol/l	1.12	0.952	1.29	0.085	0.170	
	mg/dl	48.3	41.1	55.5	3.60	7.20	Direct HDL, Immunoseparation
	mmol/l	1.25	1.06	1.44	0.095	0.190	
Iron	µg/dl	122	100	144	11.0	22.0	Agappe - CHROMAZUROL
	µmol/l	21.8	17.9	25.7	1.95	3.90	
	µg/dl	119	97.6	140	10.5	21.0	Colorimetric without ppt.
	µmol/l	21.2	17.4	25.0	1.90	3.80	
LD (LDH)	U/l	430	366	494	32.0	64.0	Agappe - SCE
Lipase	U/l	34	27	41	3.50	7.00	Agappe - METHYL RESORUFIN
Magnesium	mg/dl	2.31	2.03	2.59	0.140	0.280	Agappe - XYLIDYL BLUE
	mmol/l	0.950	0.836	1.06	0.055	0.110	
Phosphate Inorganic	mg/dl	5.11	4.34	5.88	0.385	0.770	Agappe - PHOSPOHMOLYBDATE
	mmol/l	1.65	1.40	1.90	0.125	0.250	
	mg/dl	5.11	4.34	5.88	0.385	0.770	Phosphomolybdate UV
	mmol/l	1.65	1.40	1.90	0.125	0.250	
Protein Total	g/dl	5.79	4.63	6.95	0.580	1.16	Agappe Ultra Stik
	g/l	57.9	46.3	69.5	5.80	11.6	
	g/dl	5.59	4.47	6.71	0.560	1.12	Biuret reaction, end point
	g/l	55.9	44.7	67.1	5.60	11.2	
Triglycerides	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
Urea	mg/dl	46.3	39.4	53.2	3.45	6.90	Agappe Ultra Stik
	mg/dl (BUN)	21.6	18.4	24.8	1.60	3.20	
	mmol/l	7.70	6.55	8.85	0.575	1.15	
	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease, kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.76	6.60	8.92	0.580	1.16	
Uric Acid (Urate)	mg/dl	6.42	5.59	7.25	0.415	0.830	Agappe - URICASE - PAP
	mmol/l	0.382	0.332	0.432	0.025	0.050	
	mg/dl	5.93	5.16	6.70	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.353	0.307	0.399	0.023	0.046	

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Tokyo-Boeki Biolis i30

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	6.20	5.39	7.01	0.405	0.810	Uricase Perox. with ascorb. ox
	mmol/l	0.369	0.321	0.417	0.024	0.048	
	mg/dl	6.24	5.43	7.05	0.405	0.810	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.371	0.323	0.419	0.024	0.048	

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Toshiba FR Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	4.22	3.59	4.85	0.315	0.630	Agappe - Bromocresol Green
	g/l	42.2	35.9	48.5	3.15	6.30	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Agappe - IFCC
Amylase Total	U/l	79	67	91	6.00	12.0	Agappe - CNPG3
AST (GOT)	U/l	33	26	40	3.50	7.00	Agappe - IFCC
Bilirubin Direct	mg/dl	0.661	0.522	0.800	0.070	0.139	Agappe - DIAZO
	µmol/l	11.3	8.93	13.7	1.20	2.40	
Bilirubin Total	mg/dl	1.67	1.32	2.02	0.175	0.350	Agappe - TAB
	µmol/l	28.6	22.6	34.6	3.00	6.00	
Calcium	mg/dl	8.46	7.61	9.31	0.425	0.850	Agappe - ARSENAZO
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Chloride	mmol/l	103	94.8	111	4.00	8.00	Agappe - THIOCYANATE
Cholesterol	mg/dl	144	125	163	9.50	19.0	Agappe - CHOD-PAP
	mmol/l	3.73	3.25	4.21	0.240	0.480	
CK Total	U/l	207	170	244	18.5	37.0	Gel Agglutination
Creatinine	mg/dl	1.51	1.21	1.81	0.150	0.300	Agappe - ENZYMATIC
	µmol/l	134	107	161	13.5	27.0	
	mg/dl	1.54	1.23	1.85	0.155	0.310	Agappe - JAFFE'S KINETIC
	µmol/l	136	109	163	13.5	27.0	
gamma-GT	U/l	62	53	71	4.50	9.00	Agappe - SZASZ KINETIC
Glucose	mg/dl	108	91.8	124	8.00	16.0	Agappe - GOD-PAP
	mmol/l	6.01	5.11	6.91	0.450	0.900	
HDL - Cholesterol	mg/dl	46.3	39.4	53.2	3.45	6.90	Agappe - SELECTIVE INHIBITION
	mmol/l	1.20	1.02	1.38	0.090	0.180	
Iron	µg/dl	116	95.1	137	10.5	21.0	Agappe - CHROMAZUROL
	µmol/l	20.7	17.0	24.4	1.85	3.70	
LD (LDH)	U/l	425	361	489	32.0	64.0	Agappe - SCE
Lipase	U/l	34	27	41	3.50	7.00	Agappe - METHYL RESORUFIN
Magnesium	mg/dl	2.28	2.01	2.55	0.135	0.270	Agappe - XYLIDYL BLUE
	mmol/l	0.940	0.827	1.05	0.055	0.110	
Phosphate Inorganic	mg/dl	5.21	4.43	5.99	0.390	0.780	Agappe - PHOSPOHMOLYBDATE
	mmol/l	1.68	1.43	1.93	0.125	0.250	
Protein Total	g/dl	5.82	4.66	6.98	0.580	1.16	Agappe Ultra Stik
	g/l	58.2	46.6	69.8	5.80	11.6	
Triglycerides	mg/dl	91.2	76.6	106	7.40	14.8	Quidel Triage Meter Plus
	mmol/l	1.03	0.865	1.20	0.085	0.170	

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Toshiba FR Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Urea	mg/dl	46.9	39.9	53.9	3.50	7.00	Agappe Ultra Stik
	mg/dl (BUN)	21.9	18.6	25.2	1.65	3.30	
	mmol/l	7.81	6.64	8.98	0.585	1.17	
Uric Acid (Urate)	mg/dl	6.42	5.59	7.25	0.415	0.830	Agappe - URICASE - PAP
	mmol/l	0.382	0.332	0.432	0.025	0.050	

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Tosoh AIA Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
PSA Total	ng/ml = µg/l	6.94	5.21	8.67	0.865	1.73	TOSOH AIA Series
Total T3	ng/dl	125	93.8	156	15.5	31.0	TOSOH AIA Series
	ng/ml	1.26	0.945	1.58	0.160	0.320	
	nmol/l	1.93	1.45	2.41	0.240	0.480	
Total T4	ng/ml	60.3	45.2	75.4	7.55	15.1	TOSOH AIA Series
	nmol/l	77.3	58.0	96.6	9.65	19.3	
	µg/dl	6.03	4.52	7.54	0.755	1.51	

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UDI CHEM 240 Plus

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.80	3.23	4.37	0.285	0.570	Bromocresol Green
	g/l	38.0	32.3	43.7	2.85	5.70	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Beckman IFCC Ref. with P5P
AST (GOT)	U/l	39	31	47	4.00	8.00	Beckman IFCC Ref. with P5P
Bilirubin Direct	mg/dl	0.913	0.721	1.11	0.099	0.197	Direct Spectrophotometry
	µmol/l	15.6	12.3	18.9	1.65	3.30	
Calcium	mg/dl	8.26	7.43	9.09	0.415	0.830	Arsenazo III
	mmol/l	2.06	1.85	2.27	0.105	0.210	
Cholesterol	mg/dl	152	132	172	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	3.94	3.43	4.45	0.255	0.510	
Creatinine	mg/dl	1.56	1.25	1.87	0.155	0.310	Jaffe Rate Blanked
	µmol/l	138	110	166	14.0	28.0	
Triglycerides	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	45.0	38.3	51.7	3.35	6.70	Urease, kinetic
	mg/dl (BUN)	21.0	17.9	24.1	1.55	3.10	
	mmol/l	7.49	6.37	8.61	0.560	1.12	
Uric Acid (Urate)	mg/dl	6.05	5.26	6.84	0.395	0.790	Uricase @ 293 nm
	mmol/l	0.360	0.313	0.407	0.024	0.047	

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URIT Medical 800 Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml **Range**

Analyte	Unit	Target	Low	High	1SD	2SD	Method
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Triglycerides	mg/dl	93.8	78.8	109	7.60	15.2	Lipase/GPO-PAP No Correction
	mmol/l	1.06	0.890	1.23	0.085	0.170	
Urea	mg/dl	41.3	35.1	47.5	3.10	6.20	Urease, kinetic
	mg/dl (BUN)	19.3	16.4	22.2	1.45	2.90	
	mmol/l	6.88	5.85	7.91	0.515	1.03	

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URIT Medical 8000 Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	4.04	3.43	4.65	0.305	0.610	Bromocresol Green
	g/l	40.4	34.3	46.5	3.05	6.10	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Calcium	mg/dl	8.74	7.87	9.61	0.435	0.870	Arsenazo III
	mmol/l	2.18	1.96	2.40	0.110	0.220	
Cholesterol	mg/dl	154	134	174	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.99	3.47	4.51	0.260	0.520	
Creatinine	mg/dl	1.45	1.16	1.74	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	128	102	154	13.0	26.0	
gamma-GT	U/l	64	54	74	5.00	10.0	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.11	5.19	7.03	0.460	0.920	
Protein Total	g/dl	5.79	4.63	6.95	0.580	1.16	Biuret reaction, end point
	g/l	57.9	46.3	69.5	5.80	11.6	
Triglycerides	mg/dl	99.1	83.2	115	7.95	15.9	Lipase/GPO-PAP No Correction
	mmol/l	1.12	0.941	1.30	0.090	0.180	
Urea	mg/dl	45.4	38.6	52.2	3.40	6.80	Urease, kinetic
	mg/dl (BUN)	21.2	18.0	24.4	1.60	3.20	
	mmol/l	7.56	6.43	8.69	0.565	1.13	
Uric Acid (Urate)	mg/dl	6.13	5.33	6.93	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.365	0.318	0.412	0.024	0.047	

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All enzyme values are quoted to a temperature of 37°C, unless otherwise stated

RANDOX

Wiener Lab CMD Series

Human Assayed Multi-Sera - Level 2

Lot. No: 1705UN Cat. No: HN1530 Expiry: 2028-01-28

Size: 20 x 5 ml

Analyte	Unit	Target	Range Low	Range High	1SD	2SD	Method
Albumin	g/dl	3.92	3.33	4.51	0.295	0.590	Bromocresol Green
	g/l	39.2	33.3	45.1	2.95	5.90	
Alkaline Phosphatase	U/l	276	235	317	20.5	41.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	0.977	0.772	1.18	0.102	0.203	Dichlorophenyl Diazonium
	µmol/l	16.7	13.2	20.2	1.75	3.50	
Calcium	mg/dl	8.58	7.72	9.44	0.430	0.860	Arsenazo III
	mmol/l	2.14	1.93	2.35	0.105	0.210	
Cholesterol	mg/dl	147	128	166	9.50	19.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	3.80	3.31	4.29	0.245	0.490	
CK Total	U/l	212	174	250	19.0	38.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.47	1.18	1.76	0.145	0.290	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	130	104	156	13.0	26.0	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	54	46	62	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.08	5.17	6.99	0.455	0.910	
HDL - Cholesterol	mg/dl	48.3	41.1	55.5	3.60	7.20	Direct HDL, PPD
	mmol/l	1.25	1.06	1.44	0.095	0.190	
	mg/dl	51.4	43.7	59.1	3.85	7.70	HDL Ultra/Accel Selective Detergent
	mmol/l	1.33	1.13	1.53	0.100	0.200	
LD (LDH)	U/l	402	342	462	30.0	60.0	P to L, SFBC
Phosphate Inorganic	mg/dl	5.64	4.79	6.49	0.425	0.850	Phosphomolybdate UV
	mmol/l	1.82	1.55	2.09	0.135	0.270	
Protein Total	g/dl	5.94	4.75	7.13	0.595	1.19	Biuret reaction, end point
	g/l	59.4	47.5	71.3	5.95	11.9	
Triglycerides	mg/dl	100	84.0	116	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.13	0.949	1.31	0.090	0.180	
Urea	mg/dl	48.3	41.1	55.5	3.60	7.20	Urease, kinetic
	mg/dl (BUN)	22.5	19.1	25.9	1.70	3.40	
	mmol/l	8.04	6.83	9.25	0.605	1.21	
Uric Acid (Urate)	mg/dl	5.97	5.19	6.75	0.390	0.780	Uricase perox. no ascorb. ox.
	mmol/l	0.355	0.309	0.401	0.023	0.046	

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RANDOX

Zybio Series Zybio EXC Series

Human Assayed Multi-Sera - Level 2

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Size: 20 x 5 ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/dl	3.87	3.29	4.45	0.290	0.580	Bromocresol Green
	g/l	38.7	32.9	44.5	2.90	5.80	
Alkaline Phosphatase	U/l	192	163	221	14.5	29.0	AMP optimised to IFCC
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.36	1.07	1.65	0.145	0.290	Diazo With Sulphanilic Acid
	µmol/l	23.3	18.4	28.2	2.45	4.90	
Bilirubin Total	mg/dl	1.81	1.43	2.19	0.190	0.380	Oxidation to Biliverdin/Vanadate
	µmol/l	31.0	24.5	37.5	3.25	6.50	
Calcium	mg/dl	8.22	7.40	9.04	0.410	0.820	Arsenazo III
	mmol/l	2.05	1.85	2.25	0.100	0.200	
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.03	3.51	4.55	0.260	0.520	
	mg/dl	150	131	169	9.50	19.0	Cholesterol Oxidase - IDMS
	mmol/l	3.88	3.38	4.38	0.250	0.500	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	112	95.2	129	8.50	17.0	Glucose Oxidase
	mmol/l	6.21	5.28	7.14	0.465	0.930	
	mg/dl	106	90.1	122	8.00	16.0	Hexokinase
	mmol/l	5.90	5.02	6.78	0.440	0.880	
Phosphate Inorganic	mg/dl	4.87	4.14	5.60	0.365	0.730	Phosphomolybdate UV
	mmol/l	1.57	1.33	1.81	0.120	0.240	
Protein Total	g/dl	5.52	4.42	6.62	0.550	1.10	Biuret reaction, end point
	g/l	55.2	44.2	66.2	5.50	11.0	
Triglycerides	mg/dl	95.6	80.3	111	7.70	15.4	Lipase/GPO-PAP No Correction
	mmol/l	1.08	0.907	1.25	0.085	0.170	
Urea	mg/dl	45.4	38.6	52.2	3.40	6.80	Urease, kinetic
	mg/dl (BUN)	21.1	17.9	24.3	1.60	3.20	
	mmol/l	7.55	6.42	8.68	0.565	1.13	
Uric Acid (Urate)	mg/dl	5.53	4.81	6.25	0.360	0.720	Uricase Perox. with ascorb. ox
	mmol/l	0.329	0.286	0.372	0.022	0.043	

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