RANDOX 2797 CE

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.	1676UN	**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.

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.

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Table of Content

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Abbott Alinity c

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Abbott Alinity Albumin BCG 2
	g/dl	3.95	3.36	4.54	0.295	0.590	
	g/l	38.1	32.4	43.8	2.85	5.70	Abbott Alinity Albumin BCP 2
	g/dl	3.81	3.24	4.38	0.285	0.570	
	g/l	39.4	33.5	45.3	2.95	5.90	Bromocresol Green
	g/dl	3.94	3.35	4.53	0.295	0.590	
Alkaline Phosphatase	U/l	189	161	217	14.0	28.0	Abbott Alinity Alkaline Phosphatase 2
	U/l	187	159	215	14.0	28.0	AMP non-optimised
	U/l	188	160	216	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	36	29	43	3.50	7.00	Abbott Alinity ALT 2
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P
Amylase, Pancreatic	U/l	57	48	66	4.50	9.00	Amyloclastic Methods
	U/l	57	48	66	4.50	9.00	Immunoinhibition, EPS substrate
Amylase, Total	U/l	85	72	98	6.50	13.0	Abbott Alinity Amylase 2
	U/l	86	73	99	6.50	13.0	Abbott Architect/Alinity cal factor 3431
AST (GOT)	U/l	40	32	48	4.00	8.00	Abbott Alinity AST 2
	U/l	40	32	48	4.00	8.00	Tris buffer without P5P
Bicarbonate	mmol/l	12.2	9.67	14.7	1.25	2.50	Enzymatic
	mmol/l	12.6	9.99	15.2	1.30	2.60	PEP Carboxylase
Bile Acids	µmol/l	22.8	18.2	27.4	2.30	4.60	Enzymatic Colorimetric
Bilirubin, Direct	mg/dl	1.12	0.885	1.36	0.120	0.240	Diazo with Dichloroanaline
	µmol/l	19.2	15.2	23.2	2.00	4.00	
	mg/dl	1.13	0.893	1.37	0.120	0.240	Diazo with Sulphanilic Acid
	µmol/l	19.3	15.2	23.4	2.05	4.10	
Bilirubin, Total	mg/dl	1.56	1.23	1.89	0.165	0.330	Abbott Alin/Arch cal batch no > 97447/8/9
	µmol/l	26.7	21.1	32.3	2.80	5.60	
	mg/dl	1.70	1.34	2.06	0.180	0.360	Abbott Alinity Total Bilirubin 2
	µmol/l	29.1	23.0	35.2	3.05	6.10	
	mg/dl	1.69	1.34	2.04	0.175	0.350	Diazo with Dichloroaniline
	µmol/l	28.9	22.8	35.0	3.05	6.10	
	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	1.65	1.30	2.00	0.175	0.350	Diazonium ion
	µmol/l	28.2	22.3	34.1	2.95	5.90	
Calcium	mmol/l	2.15	1.94	2.36	0.105	0.210	Arsenazo III
	mg/dl	8.62	7.76	9.48	0.430	0.860	
Chloride	mmol/l	102	93.8	110	4.00	8.00	ISE, indirect
Cholesterol	mmol/l	3.95	3.44	4.46	0.255	0.510	Abbott Alinity Cholesterol 2
	mg/dl	152	132	172	10.0	20.0	

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Abbott Alinity c

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Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Cholesterol	mmol/l	3.92	3.41	4.43	0.255	0.510	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.0	20.0	
Cholinesterase	U/l	7108	5686	8530	711	1422	Colorimetric - Butyrylthiocholine
CK, Total	U/l	208	171	245	18.5	37.0	Abbott CK-NAC (IFCC)
	U/l	205	168	242	18.5	37.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.38	1.10	1.66	0.140	0.280	Abbott Alinity Creatinine 2
	µmol/l	122	97.6	146	12.0	24.0	
	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	1.37	1.10	1.64	0.135	0.270	IDMS traceable
	µmol/l	121	96.8	145	12.0	24.0	
gamma-GT	U/l	54	46	62	4.00	8.00	Abbott Alinity GGT 2
	U/l	53	45	61	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	52	44	60	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	5.96	5.07	6.85	0.445	0.890	Hexokinase
	mg/dl	107	91.0	123	8.00	16.0	
HDL-Cholesterol	mmol/l	1.44	1.22	1.66	0.110	0.220	Direct HDL, Clearance method
	mg/dl	55.6	47.3	63.9	4.15	8.30	
	mmol/l	1.39	1.18	1.60	0.105	0.210	Direct HDL, PPD
	mg/dl	53.7	45.6	61.8	4.05	8.10	
	mmol/l	1.42	1.21	1.63	0.105	0.210	HDL Ultra/Accel Selective Detergent
	mg/dl	54.8	46.6	63.0	4.10	8.20	
Iron	µmol/l	20.9	17.1	24.7	1.90	3.80	Abbott Alinity Iron 2
	µg/dl	117	95.9	138	10.5	21.0	
	µmol/l	20.9	17.1	24.7	1.90	3.80	Colorimetric without ppt.
	µg/dl	117	95.9	138	10.5	21.0	
Lactate	mmol/l	1.54	1.26	1.82	0.140	0.280	Colorimetric - Lactate oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	199	169	229	15.0	30.0	Abbott Alinity LD 2
	U/l	201	171	231	15.0	30.0	L to P IFCC
	U/l	198	168	228	15.0	30.0	Lactate to Pyruvate methods
Lithium	mmol/l	0.939	0.826	1.05	0.056	0.111	Spectrophotometric
	mg/dl	0.652	0.574	0.730	0.039	0.078	
Magnesium	mmol/l	0.914	0.804	1.02	0.053	0.106	Arsenazo III
	mg/dl	2.22	1.95	2.49	0.135	0.270	
	mmol/l	0.936	0.824	1.05	0.057	0.114	Enzymatic
	mg/dl	2.27	2.00	2.54	0.135	0.270	
Phosphate, Inorganic	mmol/l	1.69	1.44	1.94	0.125	0.250	Phosphomolybdate enzymatic
	mg/dl	5.24	4.45	6.03	0.395	0.790	

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Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Phosphate, Inorganic	mmol/l	1.67	1.42	1.92	0.125	0.250	Phosphomolybdate UV
	mg/dl	5.18	4.40	5.96	0.390	0.780	
Potassium	mmol/l	3.92	3.61	4.23	0.155	0.310	ISE method - indirect
Protein, Total	g/l	57.4	45.9	68.9	5.75	11.5	Abbott Alinity Total Protein 2
	g/dl	5.74	4.59	6.89	0.575	1.15	
	g/l	57.0	45.6	68.4	5.70	11.4	Biuret reaction, end point
	g/dl	5.70	4.56	6.84	0.570	1.14	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.4	32.7	50.1	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	231	182	280	24.5	49.0	
Triglycerides	mmol/l	1.01	0.848	1.17	0.080	0.160	Abbott Alinity i
	mg/dl	89.4	75.1	104	7.30	14.6	
	mmol/l	1.02	0.857	1.18	0.080	0.160	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.9	105	7.35	14.7	
Urea	mmol/l	6.60	5.61	7.59	0.495	0.990	Abbott Architect Urea Nitrogen 2
	mg/dl	39.7	33.7	45.7	3.00	6.00	
	mg/dl (BUN)	18.5	15.7	21.3	1.40	2.80	
	mmol/l	7.08	6.02	8.14	0.530	1.06	Urease, kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mg/dl (BUN)	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.338	0.294	0.382	0.022	0.044	Abbott Alinity Uric Acid 2
	mg/dl	5.68	4.94	6.42	0.370	0.740	
	mmol/l	0.336	0.292	0.380	0.022	0.044	Uricase perox. no ascorb. ox.
	mg/dl	5.64	4.91	6.37	0.365	0.730	
	mmol/l	0.336	0.292	0.380	0.022	0.044	Uricase Perox. with ascorb. ox
	mg/dl	5.64	4.91	6.37	0.365	0.730	
	mmol/l	0.344	0.299	0.389	0.023	0.045	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.78	5.03	6.53	0.375	0.750	

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Abbott Alinity i

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	pmol/l	16.6	12.5	20.7	2.05	4.10	Abbott Architect/Alinity
	pg/ml	12.9	9.68	16.1	1.60	3.20	
	ng/dl	1.29	0.968	1.61	0.160	0.320	
Thyroid Stimulating Hormone (TSH)	µU/ml	1.14	0.912	1.37	0.115	0.230	Abbott Architect/ Alinity
Total T3	nmol/l	1.94	1.46	2.42	0.240	0.480	Abbott Architect/ Alinity
	ng/ml	1.26	0.945	1.58	0.160	0.320	
	ng/dl	126	94.5	158	16.0	32.0	
Total T4	nmol/l	91.1	68.3	114	11.5	22.9	Abbott Architect/ Alinity
	ng/ml	71.1	53.3	88.9	8.90	17.8	
	µg/dl	7.11	5.33	8.89	0.890	1.78	

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Abbott Architect c systems

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	38.4	32.6	44.2	2.90	5.80	Abbott Alinity Albumin BCP 2
	g/dl	3.84	3.26	4.42	0.290	0.580	
	g/l	39.3	33.4	45.2	2.95	5.90	Abbott Architect Albumin BCG 2
	g/dl	3.93	3.34	4.52	0.295	0.590	
	g/l	38.9	33.1	44.7	2.90	5.80	Abbott Architect Albumin BCP 2
	g/dl	3.89	3.31	4.47	0.290	0.580	
	g/l	39.2	33.3	45.1	2.95	5.90	Bromocresol Green
	g/dl	3.92	3.33	4.51	0.295	0.590	
Alkaline Phosphatase	U/l	190	162	218	14.0	28.0	Abbott Architect Alkaline Phosphatase 2
	U/l	185	157	213	14.0	28.0	AMP non-optimised
	U/l	185	157	213	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	35	28	42	3.50	7.00	Abbott Architect ALT 2
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P
Amylase, Pancreatic	U/l	58	49	67	4.50	9.00	Immunoinhibition, EPS substrate
Amylase, Total	U/l	87	74	100	6.50	13.0	Abbott Architect Amylase 2
	U/l	87	74	100	6.50	13.0	Abbott Architect/Alinity cal factor 3431
AST (GOT)	U/l	39	31	47	4.00	8.00	Abbott Architect AST 2
	U/l	37	30	44	3.50	7.00	Tris buffer without P5P
Bicarbonate	mmol/l	11.6	9.20	14.0	1.20	2.40	Enzymatic
	mmol/l	11.5	9.12	13.9	1.20	2.40	PEP Carboxylase
Bile Acids	µmol/l	23.8	19.0	28.6	2.40	4.80	Enzymatic Colorimetric
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	1.68	1.33	2.03	0.175	0.350	Abbott Alin/Arch cal batch no > 97447/8/9
	µmol/l	28.7	22.7	34.7	3.00	6.00	
	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	
	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	1.74	1.37	2.11	0.185	0.370	Diazonium ion
	µmol/l	29.7	23.5	35.9	3.10	6.20	
Calcium	mmol/l	2.13	1.92	2.34	0.105	0.210	Arsenazo III
	mg/dl	8.54	7.69	9.39	0.425	0.850	
Chloride	mmol/l	101	92.9	109	4.00	8.00	ISE, indirect
Cholesterol	mmol/l	3.97	3.45	4.49	0.260	0.520	Abbott Architect Cholesterol 2
	mg/dl	153	133	173	10.0	20.0	

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Abbott Architect c systems

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Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Cholesterol	mmol/l	3.99	3.47	4.51	0.260	0.520	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.0	20.0	
Cholinesterase	U/l	7044	5635	8453	705	1409	Colorimetric - Butyrylthiocholine
CK, Total	U/l	204	167	241	18.5	37.0	Abbott CK-NAC (IFCC)
	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	Abbott Architect Creatinine 2
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.33	1.06	1.60	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	118	94.4	142	12.0	24.0	
gamma-GT	U/l	53	45	61	4.00	8.00	Abbott Architect GGT 2
	U/l	53	45	61	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	mmol/l	6.00	5.10	6.90	0.450	0.900	Hexokinase
	mg/dl	108	91.8	124	8.00	16.0	
HDL-Cholesterol	mmol/l	1.45	1.23	1.67	0.110	0.220	Direct HDL, PPD
	mg/dl	56.0	47.6	64.4	4.20	8.40	
	mmol/l	1.42	1.21	1.63	0.105	0.210	HDL Ultra/Accel Selective Detergent
	mg/dl	54.8	46.6	63.0	4.10	8.20	
Iron	µmol/l	21.5	17.6	25.4	1.95	3.90	Abbott Architect Chemilum
	µg/dl	120	98.4	142	11.0	22.0	
	µmol/l	21.2	17.4	25.0	1.90	3.80	Colorimetric without ppt.
	µg/dl	119	97.6	140	10.5	21.0	
Lactate	mmol/l	1.57	1.29	1.85	0.140	0.280	Colorimetric - Lactate oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
LD (LDH)	U/l	199	169	229	15.0	30.0	Abbott Architect LD 2
	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	37	30	44	3.50	7.00	Other Colorimetric
Lithium	mmol/l	0.972	0.855	1.09	0.059	0.118	Spectrophotometric
	mg/dl	0.675	0.594	0.756	0.041	0.081	
Magnesium	mmol/l	0.921	0.810	1.03	0.055	0.109	Arsenazo III
	mg/dl	2.24	1.97	2.51	0.135	0.270	
	mmol/l	0.936	0.824	1.05	0.057	0.114	Enzymatic
	mg/dl	2.27	2.00	2.54	0.135	0.270	
Osmolality	mOsm/kg	306	245	367	30.5	61.0	Calculated
Phosphate, Inorganic	mmol/l	1.70	1.45	1.95	0.125	0.250	Phosphomolybdate enzymatic
	mg/dl	5.27	4.48	6.06	0.395	0.790	

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Abbott Architect c systems

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Phosphate, Inorganic	mmol/l	1.68	1.43	1.93	0.125	0.250	Phosphomolybdate UV
	mg/dl	5.21	4.43	5.99	0.390	0.780	
Potassium	mmol/l	3.92	3.61	4.23	0.155	0.310	ISE method - indirect
Protein, Total	g/l	58.1	46.5	69.7	5.80	11.6	Abbott Architect total Protein 2
	g/dl	5.81	4.65	6.97	0.580	1.16	
	g/l	58.0	46.4	69.6	5.80	11.6	Biuret reaction, end point
	g/dl	5.80	4.64	6.96	0.580	1.16	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.7	37.7	57.7	5.00	10.0	Calculated from Transferrin
	µg/dl	267	211	323	28.0	56.0	
	µmol/l	43.0	34.0	52.0	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	240	190	290	25.0	50.0	
Triglycerides	mmol/l	1.03	0.865	1.20	0.085	0.170	Abbott Architect Triglyceride 2
	mg/dl	91.2	76.6	106	7.40	14.8	
	mmol/l	0.999	0.839	1.16	0.081	0.161	Lipase/GK UV. no correction
	mg/dl	88.4	74.3	103	7.30	14.6	
	mmol/l	1.04	0.874	1.21	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.50	15.0	
Urea	mmol/l	7.80	6.63	8.97	0.585	1.17	Abbott Architect Urea Nitrogen 2
	mg/dl	46.9	39.9	53.9	3.50	7.00	
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.54	6.41	8.67	0.565	1.13	Urease, kinetic
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mg/dl (BUN)	21.1	17.9	24.3	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.341	0.297	0.385	0.022	0.044	Abbott Architect Uric Acid 2
	mg/dl	5.73	4.99	6.47	0.370	0.740	
	mmol/l	0.343	0.298	0.388	0.023	0.045	Uricase perox. no ascorb. ox.
	mg/dl	5.76	5.01	6.51	0.375	0.750	
	mmol/l	0.341	0.297	0.385	0.022	0.044	Uricase Perox. with ascorb. ox
	mg/dl	5.73	4.99	6.47	0.370	0.740	

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Abbott Architect i Systems

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	pmol/l	16.6	12.5	20.7	2.05	4.10	Abbott Architect/Alinity
	pg/ml	12.9	9.68	16.1	1.60	3.20	
	ng/dl	1.29	0.968	1.61	0.160	0.320	
PSA, Total	ng/ml	9.43	7.07	11.8	1.19	2.37	Abbott Architect/ Alinity
Thyroid Stimulating Hormone (TSH)	µU/ml	1.20	0.960	1.44	0.120	0.240	Abbott Architect/ Alinity
Total T3	nmol/l	1.94	1.46	2.42	0.240	0.480	Abbott Architect/ Alinity
	ng/ml	1.26	0.945	1.58	0.160	0.320	
	ng/dl	126	94.5	158	16.0	32.0	
Total T4	nmol/l	89.7	67.3	112	11.2	22.3	Abbott Architect/ Alinity
	ng/ml	70.0	52.5	87.5	8.75	17.5	
	µg/dl	7.00	5.25	8.75	0.875	1.75	

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Abbott Architect Systems(Archem Reagent)

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

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

Analyte	Unit	Target	Low	High	1SD	2SD	Method
ALT (GPT)	U/l	35	28	42	3.50	7.00	Abbott Architect ALT 2
AST (GOT)	U/l	40	32	48	4.00	8.00	Abbott Architect AST 2
gamma-GT	U/l	54	46	62	4.00	8.00	Abbott Architect GGT 2

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Advanced Ins. Micro Osmometer 3300/3320

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	315	252	378	31.5	63.0	Freezing point depression

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Advanced Instruments Osmometer

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	314	251	377	31.5	63.0	Freezing point depression

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Arkray OM-6050/ OM-6060

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			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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Beckman Access Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	pmol/l	18.8	14.1	23.5	2.35	4.70	Beckman Access/LXi725
	pg/ml	14.7	11.0	18.4	1.85	3.70	
	ng/dl	1.47	1.10	1.84	0.185	0.370	
Thyroid Stimulating Hormone (TSH)	µU/ml	1.40	1.12	1.68	0.140	0.280	Beckman DXI600/800/ Access 2 (3rd IS)

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Beckman Coulter AU Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	38.6	32.8	44.4	2.90	5.80	Bromocresol Green
	g/dl	3.86	3.28	4.44	0.290	0.580	
Alkaline Phosphatase	U/l	203	173	233	15.0	30.0	AMP optimised to IFCC
	U/l	198	168	228	15.0	30.0	Beckman AMP (Calibrator)
	U/l	193	164	222	14.5	29.0	Beckman AMP (Extinction Coeff)
	U/l	286	243	329	21.5	43.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	36	29	43	3.50	7.00	Beckman (Extinction Coefficient)
	U/l	39	31	47	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
Amylase, Total	U/l	73	62	84	5.50	11.0	Beckman CNPG3 (Extinction Coeff)
	U/l	80	68	92	6.00	12.0	Beckman CNPG3 (Master Cal)
	U/l	89	76	102	6.50	13.0	Beckman Coulter - blocked pNPG7
	U/l	79	67	91	6.00	12.0	Beckman maltotetraose
AST (GOT)	U/l	36	29	43	3.50	7.00	Beckman (Extinction Coefficient)
	U/l	38	30	46	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	PEP Carboxylase
Bile Acids	µmol/l	24.0	19.2	28.8	2.40	4.80	Enzymatic Colorimetric
	µmol/l	24.0	19.2	28.8	2.40	4.80	Enzymatic Colorimetric - Sentinel
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	1.87	1.48	2.26	0.195	0.390	DPD (Beckman AU)
	µmol/l	31.9	25.2	38.6	3.35	6.70	
Calcium	mmol/l	2.19	1.97	2.41	0.110	0.220	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.440	0.880	
Chloride	mmol/l	98.2	90.3	106	3.90	7.80	ISE, indirect
Cholesterol	mmol/l	3.80	3.31	4.29	0.245	0.490	Cholesterol Dehydrogenase
	mg/dl	147	128	166	9.50	19.0	
	mmol/l	3.92	3.41	4.43	0.255	0.510	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.0	20.0	
	mmol/l	4.08	3.55	4.61	0.265	0.530	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.0	20.0	
CK, Total	U/l	204	167	241	18.5	37.0	Beckman CK-NAC (Extinction Coeff)
	U/l	215	176	254	19.5	39.0	Beckman CK-NAC (IFCC)
	U/l	215	176	254	19.5	39.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.34	1.07	1.61	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	119	95.2	143	12.0	24.0	
	mg/dl	1.33	1.06	1.60	0.135	0.270	IDMS traceable
	µmol/l	118	94.4	142	12.0	24.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Jaffe rate blanked
	µmol/l	126	101	151	12.5	25.0	

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Beckman Coulter AU Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	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	0.301	0.256	0.346	0.023	0.045	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer
Glucose	mmol/l	5.85	4.97	6.73	0.440	0.880	Glucose oxidase
	mg/dl	105	89.3	121	8.00	16.0	
	mmol/l	5.99	5.09	6.89	0.450	0.900	Hexokinase
	mg/dl	108	91.8	124	8.00	16.0	
HDL-Cholesterol	mmol/l	1.24	1.05	1.43	0.095	0.190	Direct HDL, Immunoseparation
	mg/dl	47.9	40.7	55.1	3.60	7.20	
	mmol/l	1.22	1.04	1.40	0.090	0.180	Direct HDL, PPD
	mg/dl	47.1	40.0	54.2	3.55	7.10	
	mmol/l	1.46	1.24	1.68	0.110	0.220	HDL Ultra/Accel Selective Detergent
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	20.6	16.9	24.3	1.85	3.70	Colorimetric with ppt.
	µg/dl	115	94.3	136	10.5	21.0	
	µmol/l	20.2	16.6	23.8	1.80	3.60	Colorimetric without ppt.
	µg/dl	113	92.7	133	10.0	20.0	
Lactate	mmol/l	1.47	1.21	1.73	0.130	0.260	Colorimetric - Lactate oxidase
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LD (LDH)	U/l	186	158	214	14.0	28.0	L to P Beckman (Extinction Coeff)
	U/l	204	173	235	15.5	31.0	L to P IFCC
	U/l	445	378	512	33.5	67.0	P to L Scandinavian & Dutch
	U/l	435	370	500	32.5	65.0	Pyruvate 1.4 mM - Beckman LD-P
Lipase	U/l	46	37	55	4.50	9.00	Colorimetric Randox
	U/l	38	30	46	4.00	8.00	Other Colorimetric
Lithium	mmol/l	0.976	0.859	1.09	0.057	0.114	Spectrophotometric
	mg/dl	0.678	0.597	0.759	0.041	0.081	
Magnesium	mmol/l	0.943	0.830	1.06	0.059	0.117	Xylidyl Blue
	mg/dl	2.29	2.02	2.56	0.135	0.270	
Osmolality	mOsm/kg	297	238	356	29.5	59.0	Calculated
Phosphate, Inorganic	mmol/l	1.70	1.45	1.95	0.125	0.250	Phosphomolybdate UV
	mg/dl	5.27	4.48	6.06	0.395	0.790	
Potassium	mmol/l	3.91	3.60	4.22	0.155	0.310	ISE method - indirect
Protein, Total	g/l	56.1	44.9	67.3	5.60	11.2	Biuret reaction, end point
	g/dl	5.61	4.49	6.73	0.560	1.12	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect

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Beckman Coulter AU Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
TIBC	µmol/l	46.6	36.8	56.4	4.90	9.80	Direct Colorimetric
	µg/dl	260	205	315	27.5	55.0	
	µmol/l	47.2	37.3	57.1	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	264	209	319	27.5	55.0	
Triglycerides	mmol/l	1.06	0.890	1.23	0.085	0.170	Lipase/GK UV. no correction
	mg/dl	93.8	78.8	109	7.60	15.2	
	mmol/l	1.05	0.882	1.22	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	92.9	78.0	108	7.55	15.1	
Urea	mmol/l	7.38	6.27	8.49	0.555	1.11	Urease, end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mg/dl (BUN)	20.7	17.6	23.8	1.55	3.10	
	mmol/l	7.45	6.33	8.57	0.560	1.12	Urease, kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mg/dl (BUN)	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.352	0.306	0.398	0.023	0.046	Uricase perox. no ascorb. ox.
	mg/dl	5.91	5.14	6.68	0.385	0.770	
	mmol/l	0.351	0.305	0.397	0.023	0.046	Uricase Perox. with ascorb. ox
	mg/dl	5.90	5.13	6.67	0.385	0.770	

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Biomerieux Vidas/miniVidas/Vidas 3

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	pmol/l	19.2	14.4	24.0	2.40	4.80	bioMerieux, VIDAS-FT4N Kit
	pg/ml	15.0	11.3	18.7	1.85	3.70	
	ng/dl	1.50	1.13	1.87	0.185	0.370	

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	99.4	91.4	107	3.80	7.60	ISE, direct
Potassium	mmol/l	3.87	3.56	4.18	0.155	0.310	ISE method - direct
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Calcium	mmol/l	2.15	1.94	2.36	0.105	0.210	Arsenazo III
	mg/dl	8.62	7.76	9.48	0.430	0.860	
Glucose	mmol/l	6.10	5.19	7.01	0.455	0.910	Glucose oxidase
	mg/dl	110	93.5	127	8.50	17.0	
Urea	mmol/l	7.65	6.50	8.80	0.575	1.15	Urease, kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mg/dl (BUN)	21.4	18.2	24.6	1.60	3.20	

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ELITech Selectra Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.315	0.630	
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
Calcium	mmol/l	2.21	1.99	2.43	0.110	0.220	Arsenazo III
	mg/dl	8.86	7.97	9.75	0.445	0.890	
Glucose	mmol/l	6.22	5.29	7.15	0.465	0.930	Glucose oxidase
	mg/dl	112	95.2	129	8.50	17.0	
Protein, Total	g/l	57.0	45.6	68.4	5.70	11.4	Biuret reaction, end point
	g/dl	5.70	4.56	6.84	0.570	1.14	
Urea	mmol/l	7.48	6.36	8.60	0.560	1.12	Urease, kinetic
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mg/dl (BUN)	21.0	17.9	24.1	1.55	3.10	

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RANDOX

Hitachi Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

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

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Chloride	mmol/l	96.1	88.4	104	3.95	7.90	ISE, indirect
Cholesterol	mmol/l	3.87	3.37	4.37	0.250	0.500	Cholesterol Oxidase - Abell Kendall
	mg/dl	149	130	168	9.50	19.0	
Potassium	mmol/l	3.97	3.65	4.29	0.160	0.320	ISE method - indirect
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect

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Medica Easylyte instruments

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	101	92.9	109	4.00	8.00	ISE, direct
Potassium	mmol/l	3.81	3.51	4.11	0.150	0.300	ISE method - direct
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct

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Method

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Acid Phos., Total	U/l	13	9	17	2.00	4.00	Naphthyl phos. sub., kinetic
Albumin	g/l	40.0	34.0	46.0	3.00	6.00	Bromocresol Green
	g/dl	4.00	3.40	4.60	0.300	0.600	
	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Purple
	g/dl	4.03	3.43	4.63	0.300	0.600	
	g/l	39.7	33.7	45.7	3.00	6.00	Ortho Vitros MicroSlide Systems
	g/dl	3.97	3.37	4.57	0.300	0.600	
	g/l	38.9	33.1	44.7	2.90	5.80	Turbidimetric Assays
	g/dl	3.89	3.31	4.47	0.290	0.580	
Alkaline Phosphatase	U/l	185	157	213	14.0	28.0	AMP non-optimised
	U/l	187	159	215	14.0	28.0	AMP optimised to IFCC
	U/l	177	150	204	13.5	27.0	Colorimetric
	U/l	264	224	304	20.0	40.0	Diethanolamine buffer, DEA
alpha-HBDH	U/l	205	162	248	21.5	43.0	Oxobutyrate < 10 mmol/l
ALT (GPT)	U/l	35	28	42	3.50	7.00	Colorimetric
	U/l	38	30	46	4.00	8.00	Tris buffer with P5P
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P
Amylase, Pancreatic	U/l	58	49	67	4.50	9.00	Immunoinhibition, EPS substrate
Amylase, Total	U/l	85	72	98	6.50	13.0	Abbott Alinity Amylase 2
	U/l	87	74	100	6.50	13.0	Abbott Architect Amylase 2
	U/l	86	73	99	6.50	13.0	Abbott Architect/Alinity cal factor 3431
	U/l	80	68	92	6.00	12.0	Beckman CNPG3 (Master Cal)
	U/l	89	76	102	6.50	13.0	Beckman Coulter - blocked pNPG7
	U/l	85	72	98	6.50	13.0	BM/Roche Colorimetric pNPG7
	U/l	66	56	76	5.00	10.0	Ortho Vitros MicroSlide Systems
	U/l	85	72	98	6.50	13.0	Roche Integra 2-chloro-pNPG7
	U/l	85	72	98	6.50	13.0	Roche liquid stable pNPG7
	U/l	92	78	106	7.00	14.0	Siemens - blocked pNPG7
	U/l	88	75	101	6.50	13.0	Siemens 2-chloro-pNPG3
Apolipoprotein A1	g/l	1.07	0.877	1.26	0.095	0.190	Immunoturbidimetric
	mg/dl	107	87.7	126	9.50	19.0	
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	51	41	61	5.00	10.0	Ortho Vitros MicroSlide visible
	U/l	47	38	56	4.50	9.00	Tris buffer with P5P
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
Bile Acids	µmol/l	27.8	22.2	33.4	2.80	5.60	4th Generation Colorimetric
	µmol/l	24.6	19.7	29.5	2.45	4.90	5th Generation Colorimetric

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Method

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
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	1.13	0.893	1.37	0.120	0.240	Diazo with Sulphanilic Acid
	µmol/l	19.4	15.3	23.5	2.05	4.10	
	mg/dl	0.825	0.652	0.998	0.087	0.173	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	14.1	11.1	17.1	1.50	3.00	
	mg/dl	1.18	0.932	1.43	0.125	0.250	Dichlorophenyl Diazonium
	µmol/l	20.2	16.0	24.4	2.10	4.20	
	mg/dl	1.12	0.885	1.36	0.120	0.240	Modified Jendrassik
	µmol/l	19.1	15.1	23.1	2.00	4.00	
	mg/dl	1.13	0.893	1.37	0.120	0.240	Oxidation to Biliverdin/Vanadate
	µmol/l	19.3	15.2	23.4	2.05	4.10	
Bilirubin, Total	mg/dl	1.71	1.35	2.07	0.180	0.360	Diazo with Dichloroaniline
	µmol/l	29.2	23.1	35.3	3.05	6.10	
	mg/dl	1.75	1.38	2.12	0.185	0.370	Diazo with Sulphanilic Acid
	µmol/l	29.9	23.6	36.2	3.15	6.30	
	mg/dl	1.64	1.30	1.98	0.170	0.340	Diazonium ion
	µmol/l	28.1	22.2	34.0	2.95	5.90	
	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	
	mg/dl	2.23	1.76	2.70	0.235	0.470	Modified Jendrassik
	µmol/l	38.1	30.1	46.1	4.00	8.00	
	mg/dl	1.83	1.45	2.21	0.190	0.380	Ortho Vitros MicroSlide Total Bil
	µmol/l	31.3	24.7	37.9	3.30	6.60	
	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	mmol/l	2.16	1.94	2.38	0.110	0.220	Arsenazo III
	mg/dl	8.66	7.79	9.53	0.435	0.870	
	mmol/l	2.12	1.91	2.33	0.105	0.210	Cresolphthalein complexone
	mg/dl	8.50	7.65	9.35	0.425	0.850	
	mmol/l	2.17	1.95	2.39	0.110	0.220	NM-BAPTA
	mg/dl	8.70	7.83	9.57	0.435	0.870	
	mmol/l	2.16	1.94	2.38	0.110	0.220	Ortho Vitros MicroSlide Systems
	mg/dl	8.66	7.79	9.53	0.435	0.870	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE, direct
	mmol/l	97.9	90.1	106	4.05	8.10	ISE, indirect
	mmol/l	102	93.8	110	4.00	8.00	Ortho Vitros MicroSlide Systems
Cholesterol	mmol/l	3.97	3.45	4.49	0.260	0.520	Abbott Architect Cholesterol 2
	mg/dl	153	133	173	10.0	20.0	

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Method

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Cholesterol	mmol/l	3.97	3.45	4.49	0.260	0.520	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.0	20.0	
	mmol/l	3.99	3.47	4.51	0.260	0.520	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.0	20.0	
	mmol/l	4.00	3.48	4.52	0.260	0.520	Ortho Vitros MicroSlide Systems
	mg/dl	154	134	174	10.0	20.0	
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	195	160	230	17.5	35.0	Creatine phosphate substrate start
	U/l	190	156	224	17.0	34.0	Ortho Vitros MicroSlide Systems
Copper	µmol/l	18.5	14.8	22.2	1.85	3.70	Colorimetric
	µg/dl	118	94.4	142	12.0	24.0	
Cortisol	nmol/l	467	350	584	58.5	117	Roche Cobas e402/e801
	µg/dl	16.8	12.6	21.0	2.10	4.20	
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	1.34	1.07	1.61	0.135	0.270	IDMS traceable
	µmol/l	119	95.2	143	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	1.37	1.10	1.64	0.135	0.270	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.36	1.09	1.63	0.135	0.270	Jaffe rate comp. (-18umol/l)
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.33	1.06	1.60	0.135	0.270	Vitros, IDMS traceable
	µmol/l	118	94.4	142	12.0	24.0	
D-3-Hydroxybutyrate	mmol/l	0.299	0.254	0.344	0.023	0.045	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.98	1.58	2.38	0.200	0.400	Immunoturbidimetric
	ng/ml	1.55	1.24	1.86	0.155	0.310	
Folate	nmol/l	18.9	14.4	23.4	2.25	4.50	Roche Cobas e402/e801
	ng/ml	8.33	6.33	10.3	0.985	1.97	
Free T4	pmol/l	16.6	12.5	20.7	2.05	4.10	Abbott Architect/Alinity
	pg/ml	12.9	9.68	16.1	1.60	3.20	
	ng/dl	1.29	0.968	1.61	0.160	0.320	
	pmol/l	21.1	15.8	26.4	2.65	5.30	Roche Cobas 4000/e411
	pg/ml	16.5	12.4	20.6	2.05	4.10	
	ng/dl	1.65	1.24	2.06	0.205	0.410	

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	pmol/l	21.8	16.4	27.2	2.70	5.40	Roche Cobas e402/e801
	pg/ml	17.0	12.8	21.2	2.10	4.20	
	ng/dl	1.70	1.28	2.12	0.210	0.420	
	pmol/l	21.5	16.1	26.9	2.70	5.40	Roche Cobas e601/ 602
	pg/ml	16.8	12.6	21.0	2.10	4.20	
	ng/dl	1.68	1.26	2.10	0.210	0.420	
gamma-GT	U/l	54	46	62	4.00	8.00	Abbott Alinity GGT 2
	U/l	54	46	62	4.00	8.00	Abbott Architect GGT 2
	U/l	50	43	57	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
	U/l	54	46	62	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
	U/l	57	48	66	4.50	9.00	Ortho Vitros MicroSlide Systems
Gentamicin	µmol/l	7.11	5.69	8.53	0.710	1.42	Gravimetric
	µg/ml	3.40	2.72	4.08	0.340	0.680	
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer
Glucose	mmol/l	6.16	5.24	7.08	0.460	0.920	Glucose oxidase
	mg/dl	111	94.4	128	8.50	17.0	
	mmol/l	6.05	5.14	6.96	0.455	0.910	Hexokinase
	mg/dl	109	92.7	125	8.00	16.0	
	mmol/l	6.04	5.13	6.95	0.455	0.910	Ortho Vitros MicroSlide Systems
	mg/dl	109	92.7	125	8.00	16.0	
HDL-Cholesterol	mmol/l	1.24	1.05	1.43	0.095	0.190	Direct HDL, Immunoseparation
	mg/dl	47.9	40.7	55.1	3.60	7.20	
	mmol/l	1.38	1.17	1.59	0.105	0.210	Direct HDL, PEGME
	mg/dl	53.3	45.3	61.3	4.00	8.00	
	mmol/l	1.38	1.17	1.59	0.105	0.210	Direct HDL, PPD
	mg/dl	53.3	45.3	61.3	4.00	8.00	
	mmol/l	1.32	1.12	1.52	0.100	0.200	Direct HDL, Roche 4th gen.
	mg/dl	51.0	43.4	58.6	3.80	7.60	
	mmol/l	1.43	1.22	1.64	0.105	0.210	HDL Ultra/Accel Selective Detergent
	mg/dl	55.2	46.9	63.5	4.15	8.30	
	mmol/l	1.26	1.07	1.45	0.095	0.190	Vitros dHDL, PTA/MgCl2 direct precip.
	mg/dl	48.6	41.3	55.9	3.65	7.30	
IgA	g/l	1.92	1.44	2.40	0.240	0.480	Turbidimetric (IFCC Cal.)
	mg/dl	192	144	240	24.0	48.0	
IgG	g/l	6.95	5.70	8.20	0.625	1.25	Turbidimetric (IFCC Cal.)
	mg/dl	695	570	820	62.5	125	
IgM	g/l	0.663	0.530	0.796	0.067	0.133	Turbidimetric (IFCC Cal.)
	mg/dl	66.3	53.0	79.6	6.65	13.3	

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Method

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	91.8	132	10.0	20.0	
	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	91.8	132	10.0	20.0	
	µmol/l	21.6	17.7	25.5	1.95	3.90	Ortho Vitros MicroSlide Systems
	µg/dl	121	99.2	143	11.0	22.0	
Lactate	mmol/l	1.52	1.25	1.79	0.135	0.270	Colorimetric - Lactate oxidase
	mg/dl	13.7	11.2	16.2	1.25	2.50	
LD (LDH)	U/l	211	179	243	16.0	32.0	L to P IFCC
	U/l	204	173	235	15.5	31.0	Lactate to Pyruvate methods
	U/l	231	196	266	17.5	35.0	Ortho Vitros IFCC Traceable
	U/l	413	351	475	31.0	62.0	P to L German methods
	U/l	444	377	511	33.5	67.0	P to L Scandinavian & Dutch
	U/l	423	360	486	31.5	63.0	P to L SFBC / SEQC
Lipase	U/l	46	37	55	4.50	9.00	Colorimetric Randox
	U/l	38	30	46	4.00	8.00	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	38	30	46	4.00	8.00	Colorimetric Roche ACN(8)789/ID 0-052
	U/l	249	200	298	24.5	49.0	Ortho Vitros MicroSlide Systems
Lithium	mmol/l	0.965	0.849	1.08	0.058	0.115	Spectrophotometric
	mg/dl	0.670	0.590	0.750	0.040	0.080	
Magnesium	mmol/l	0.912	0.803	1.02	0.054	0.108	Arsenazo III
	mg/dl	2.22	1.95	2.49	0.135	0.270	
	mmol/l	0.956	0.841	1.07	0.057	0.114	Chlorphosphonazo III
	mg/dl	2.32	2.04	2.60	0.140	0.280	
	mmol/l	0.937	0.825	1.05	0.057	0.113	Enzymatic
	mg/dl	2.28	2.01	2.55	0.135	0.270	
	mmol/l	0.922	0.811	1.03	0.054	0.108	Methylthymol blue
	mg/dl	2.24	1.97	2.51	0.135	0.270	
	mmol/l	0.951	0.837	1.07	0.060	0.119	Ortho Vitros MicroSlide Systems
	mg/dl	2.31	2.03	2.59	0.140	0.280	
	mmol/l	0.947	0.833	1.06	0.057	0.113	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.140	0.280	
NEFA	mmol/l	1.21	0.968	1.45	0.120	0.240	Colorimetric
Osmolality	mOsm/kg	299	239	359	30.0	60.0	Calculated
	mOsm/kg	313	250	376	31.5	63.0	Freezing point depression
Paracetamol (Acetamin.)	mmol/l	0.090	0.072	0.108	0.009	0.018	Gravimetric
	mg/l	13.6	10.9	16.3	1.35	2.70	

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Method

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Phosphate, Inorganic	mmol/l	1.75	1.49	2.01	0.130	0.260	Ortho Vitros MicroSlide Systems
	mg/dl	5.43	4.62	6.24	0.405	0.810	
	mmol/l	1.70	1.45	1.95	0.125	0.250	Phosphomolybdate enzymatic
	mg/dl	5.27	4.48	6.06	0.395	0.790	
	mmol/l	1.70	1.45	1.95	0.125	0.250	Phosphomolybdate UV
	mg/dl	5.27	4.48	6.06	0.395	0.790	
Potassium	mmol/l	4.00	3.68	4.32	0.160	0.320	Enzymatic
	mmol/l	3.87	3.56	4.18	0.155	0.310	ISE method - direct
	mmol/l	3.94	3.62	4.26	0.160	0.320	ISE method - indirect
	mmol/l	3.95	3.63	4.27	0.160	0.320	Ortho Vitros MicroSlide Systems
Protein, Total	g/l	56.3	45.0	67.6	5.65	11.3	Biuret reaction, end point
	g/dl	5.63	4.50	6.76	0.565	1.13	
	g/l	55.9	44.7	67.1	5.60	11.2	Biuret reaction, kinetic
	g/dl	5.59	4.47	6.71	0.560	1.12	
	g/l	57.9	46.3	69.5	5.80	11.6	Ortho Vitros MicroSlide Systems
	g/dl	5.79	4.63	6.95	0.580	1.16	
PSA, Total	ng/ml	9.66	7.25	12.1	1.22	2.44	Abbott Architect/ Alinity
	ng/ml	12.9	9.68	16.1	1.60	3.20	Roche Cobas 4000/e411
	ng/ml	12.3	9.23	15.4	1.55	3.10	Roche Cobas e402/e801
	ng/ml	12.7	9.53	15.9	1.60	3.20	Roche Cobas e601/602
Salicylate	mmol/l	0.430	0.344	0.516	0.043	0.086	Gravimetric
	mg/dl	5.93	4.74	7.12	0.595	1.19	
Sodium	mmol/l	140	133	147	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
	mmol/l	141	134	148	3.50	7.00	Ortho Vitros MicroSlide Systems
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.08	6.12	0.510	1.02	
Thyroid Stimulating Hormone (TSH)	µU/ml	1.17	0.936	1.40	0.115	0.230	Abbott Architect/ Alinity
	µU/ml	1.70	1.36	2.04	0.170	0.340	Roche Cobas 4000/e411
	µU/ml	1.59	1.27	1.91	0.160	0.320	Roche Cobas e402/e801
	µU/ml	1.64	1.31	1.97	0.165	0.330	Roche Cobas e601/ 602
TIBC	µmol/l	46.5	36.7	56.3	4.90	9.80	Calculated from Transferrin
	µg/dl	260	205	315	27.5	55.0	
	µmol/l	49.1	38.8	59.4	5.15	10.3	Direct Colorimetric
	µg/dl	274	216	332	29.0	58.0	
	µmol/l	43.6	34.4	52.8	4.60	9.20	FE+UIBC(saturation with iron)
	µg/dl	244	193	295	25.5	51.0	

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Method

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Tobramycin	µmol/l	6.30	5.04	7.56	0.630	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.295	0.590	
Total T3	nmol/l	1.94	1.46	2.42	0.240	0.480	Abbott Architect/ Alinity
	ng/ml	1.26	0.945	1.58	0.160	0.320	
	ng/dl	126	94.5	158	16.0	32.0	
Total T4	nmol/l	90.8	68.1	114	11.6	23.2	Abbott Architect/ Alinity
	ng/ml	70.8	53.1	88.5	8.85	17.7	
	µg/dl	7.08	5.31	8.85	0.885	1.77	
Transferrin	g/l	1.98	1.58	2.38	0.200	0.400	Turbidimetric (IFCC Cal.)
	mg/dl	198	158	238	20.0	40.0	
Triglycerides	mmol/l	1.06	0.890	1.23	0.085	0.170	Lipase/GK UV. no correction
	mg/dl	93.8	78.8	109	7.60	15.2	
	mmol/l	1.06	0.890	1.23	0.085	0.170	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.8	109	7.60	15.2	
	mmol/l	1.07	0.899	1.24	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.65	15.3	
	mmol/l	1.07	0.899	1.24	0.085	0.170	Lipase/GPO-PAP, 0.11mmol/l correction
	mg/dl	94.7	79.5	110	7.65	15.3	
	mmol/l	1.23	1.03	1.43	0.100	0.200	Ortho Vitros MicroSlide Systems
	mg/dl	109	91.6	126	8.50	17.0	
Urea	mmol/l	6.84	5.81	7.87	0.515	1.03	Ortho Vitros MicroSlide Systems
	mg/dl	41.1	34.9	47.3	3.10	6.20	
	mg/dl (BUN)	19.2	16.3	22.1	1.45	2.90	
	mmol/l	7.27	6.18	8.36	0.545	1.09	Urease, end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mg/dl (BUN)	20.4	17.3	23.5	1.55	3.10	
	mmol/l	7.34	6.24	8.44	0.550	1.10	Urease, kinetic
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mg/dl (BUN)	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.339	0.295	0.383	0.022	0.044	Ortho Vitros MicroSlide Systems
	mg/dl	5.70	4.96	6.44	0.370	0.740	
	mmol/l	0.349	0.304	0.394	0.023	0.045	Uricase @ 293 nm
	mg/dl	5.86	5.10	6.62	0.380	0.760	
	mmol/l	0.347	0.302	0.392	0.023	0.045	Uricase perox. no ascorb. ox.
	mg/dl	5.83	5.07	6.59	0.380	0.760	

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Method

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mmol/l	0.344	0.299	0.389	0.023	0.045	Uricase Perox. with ascorb. ox
	mg/dl	5.78	5.03	6.53	0.375	0.750	
	mmol/l	0.344	0.299	0.389	0.023	0.045	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.78	5.03	6.53	0.375	0.750	
Vitamin B12	pmol/l	458	366	550	46.0	92.0	Roche Cobas e402/e801
	pg/ml	621	497	745	62.0	124	
Zinc	µmol/l	28.5	22.8	34.2	2.85	5.70	Colorimetric with deprot.
	µg/dl	186	149	223	18.5	37.0	

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Mindray BS Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	39.4	33.5	45.3	2.95	5.90	Bromocresol Green
	g/dl	3.94	3.35	4.53	0.295	0.590	
Alkaline Phosphatase	U/l	190	162	218	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P
Amylase, Total	U/l	86	73	99	6.50	13.0	pNP Maltotrioside substrates
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P
Bilirubin, Direct	mg/dl	1.13	0.893	1.37	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.3	15.2	23.4	2.05	4.10	
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	
	mg/dl	1.73	1.37	2.09	0.180	0.360	Dichlorophenyl Diazonium
	µmol/l	29.5	23.3	35.7	3.10	6.20	
Calcium	mmol/l	2.18	1.96	2.40	0.110	0.220	Arsenazo III
	mg/dl	8.74	7.87	9.61	0.435	0.870	
Cholesterol	mmol/l	4.00	3.48	4.52	0.260	0.520	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.0	20.0	
CK, Total	U/l	212	174	250	19.0	38.0	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	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
Glucose	mmol/l	6.27	5.33	7.21	0.470	0.940	Glucose oxidase
	mg/dl	113	96.1	130	8.50	17.0	
HDL-Cholesterol	mmol/l	1.23	1.05	1.41	0.090	0.180	Direct HDL, Clearance method
	mg/dl	47.5	40.4	54.6	3.55	7.10	
LD (LDH)	U/l	208	177	239	15.5	31.0	L to P IFCC
	U/l	427	363	491	32.0	64.0	P to L German methods
	U/l	427	363	491	32.0	64.0	P to L SFBC / SEQC
Magnesium	mmol/l	0.981	0.863	1.10	0.060	0.119	Xylidyl Blue
	mg/dl	2.38	2.09	2.67	0.145	0.290	
Phosphate, Inorganic	mmol/l	1.61	1.37	1.85	0.120	0.240	Phosphomolybdate UV
	mg/dl	4.99	4.24	5.74	0.375	0.750	
Protein, Total	g/l	56.6	45.3	67.9	5.65	11.3	Biuret reaction, end point
	g/dl	5.66	4.53	6.79	0.565	1.13	
Triglycerides	mmol/l	1.04	0.874	1.21	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.50	15.0	

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Mindray BS Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Urea	mmol/l	7.59	6.45	8.73	0.570	1.14	Urease, kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.350	0.305	0.395	0.023	0.045	Uricase perox. no ascorb. ox.
	mg/dl	5.88	5.12	6.64	0.380	0.760	
	mmol/l	0.344	0.299	0.389	0.023	0.045	Uricase Perox. with ascorb. ox
	mg/dl	5.78	5.03	6.53	0.375	0.750	
	mmol/l	0.352	0.306	0.398	0.023	0.046	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.91	5.14	6.68	0.385	0.770	

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RANDOX

Osmometer - Freezing Point Dep.

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml **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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Radiometer ABL 90 FLEX/ FLEX PLUS

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Lactate	mmol/l	1.43	1.17	1.69	0.130	0.260	Enzymatic Electrode
	mg/dl	12.9	10.6	15.2	1.15	2.30	

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Randox RX Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	38.9	33.1	44.7	2.90	5.80	Bromocresol Green
	g/dl	3.89	3.31	4.47	0.290	0.580	
Alkaline Phosphatase	U/l	197	167	227	15.0	30.0	AMP optimised to IFCC
	U/l	314	267	361	23.5	47.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P
Amylase, Pancreatic	U/l	65	55	75	5.00	10.0	Randox liquid stable pNPG7
Amylase, Total	U/l	99	84	114	7.50	15.0	Randox Liquid Ethylidene pNPG7
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P
Bicarbonate	mmol/l	11.8	9.36	14.2	1.20	2.40	Enzymatic
Bile Acids	µmol/l	24.6	19.7	29.5	2.45	4.90	5th Generation Colorimetric
Bilirubin, Direct	mg/dl	1.24	0.980	1.50	0.130	0.260	Diazo with Sulphanilic Acid
	µmol/l	21.2	16.7	25.7	2.25	4.50	
	mg/dl	1.02	0.806	1.23	0.105	0.210	Oxidation to Biliverdin/Vanadate
	µmol/l	17.5	13.8	21.2	1.85	3.70	
Bilirubin, Total	mg/dl	1.94	1.53	2.35	0.205	0.410	Diazo with Sulphanilic Acid
	µmol/l	33.2	26.2	40.2	3.50	7.00	
	mg/dl	1.84	1.45	2.23	0.195	0.390	Oxidation to Biliverdin/Vanadate
	µmol/l	31.4	24.8	38.0	3.30	6.60	
Calcium	mmol/l	2.23	2.01	2.45	0.110	0.220	Arsenazo III
	mg/dl	8.94	8.05	9.83	0.445	0.890	
Chloride	mmol/l	95.9	88.2	104	4.05	8.10	ISE, direct
Cholesterol	mmol/l	4.30	3.74	4.86	0.280	0.560	Cholesterol Oxidase - Abell Kendall
	mg/dl	166	144	188	11.0	22.0	
CK, Total	U/l	213	175	251	19.0	38.0	CK-NAC (IFCC)
	U/l	205	168	242	18.5	37.0	CK-NAC substrate start (DGKC)
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	1.47	1.18	1.76	0.145	0.290	Enzymatic UV method
	µmol/l	130	104	156	13.0	26.0	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.12	5.20	7.04	0.460	0.920	Glucose oxidase
	mg/dl	110	93.5	127	8.50	17.0	
	mmol/l	6.34	5.39	7.29	0.475	0.950	Hexokinase
	mg/dl	114	96.9	131	8.50	17.0	
Iron	µmol/l	21.6	17.7	25.5	1.95	3.90	Colorimetric without ppt.
	µg/dl	121	99.2	143	11.0	22.0	
Lactate	mmol/l	1.55	1.27	1.83	0.140	0.280	Colorimetric - Lactate oxidase
	mg/dl	14.0	11.5	16.5	1.25	2.50	
LD (LDH)	U/l	214	182	246	16.0	32.0	L to P IFCC

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RANDOX

Randox RX Series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
LD (LDH)	U/l	405	344	466	30.5	61.0	P to L German methods
Lipase	U/l	47	38	56	4.50	9.00	Colorimetric Randox
Magnesium	mmol/l	0.947	0.833	1.06	0.057	0.113	Xylidyl Blue
	mg/dl	2.30	2.02	2.58	0.140	0.280	
Phosphate, Inorganic	mmol/l	1.66	1.41	1.91	0.125	0.250	Phosphomolybdate UV
	mg/dl	5.15	4.38	5.92	0.385	0.770	
Potassium	mmol/l	4.00	3.68	4.32	0.160	0.320	Enzymatic
	mmol/l	4.04	3.72	4.36	0.160	0.320	ISE method - direct
Protein, Total	g/l	57.2	45.8	68.6	5.70	11.4	Biuret reaction, end point
	g/dl	5.72	4.58	6.86	0.570	1.14	
Sodium	mmol/l	140	133	147	3.50	7.00	Enzymatic
	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.09	0.916	1.26	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.75	15.5	
Urea	mmol/l	7.28	6.19	8.37	0.545	1.09	Urease, kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mg/dl (BUN)	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.353	0.307	0.399	0.023	0.046	Uricase perox. no ascorb. ox.
	mg/dl	5.93	5.16	6.70	0.385	0.770	
	mmol/l	0.345	0.300	0.390	0.023	0.045	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.80	5.05	6.55	0.375	0.750	

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Roche AVL 9100 series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	99.9	91.9	108	4.05	8.10	ISE, direct
Potassium	mmol/l	3.95	3.63	4.27	0.160	0.320	ISE method - direct
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct

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Roche AVL OMNI S/b221

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	98.2	90.3	106	3.90	7.80	ISE, direct
Potassium	mmol/l	3.82	3.51	4.13	0.155	0.310	ISE method - direct
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - direct

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Roche Cobas c111

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Size: 20 x 5ml / 5 x 5ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/l	41.0	34.9	47.1	3.05	6.10	Bromocresol Green
	g/dl	4.10	3.49	4.71	0.305	0.610	
Alkaline Phosphatase	U/l	169	144	194	12.5	25.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P
Amylase, Total	U/l	84	71	97	6.50	13.0	Roche liquid stable pNPG7
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P
Bilirubin, Direct	mg/dl	1.22	0.964	1.48	0.130	0.260	Dichlorophenyl Diazonium
	µmol/l	20.8	16.4	25.2	2.20	4.40	
	mg/dl	1.16	0.916	1.40	0.120	0.240	Roche DPD JG standardised
	µmol/l	19.9	15.7	24.1	2.10	4.20	
Bilirubin, Total	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	mmol/l	2.13	1.92	2.34	0.105	0.210	NM-BAPTA
	mg/dl	8.54	7.69	9.39	0.425	0.850	
Cholesterol	mmol/l	3.87	3.37	4.37	0.250	0.500	Cholesterol Oxidase - Abell Kendall
	mg/dl	149	130	168	9.50	19.0	
	mmol/l	3.94	3.43	4.45	0.255	0.510	Cholesterol Oxidase - IDMS
	mg/dl	152	132	172	10.0	20.0	
CK, Total	U/l	193	158	228	17.5	35.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.42	1.14	1.70	0.140	0.280	Roche Creatinine Plus
	µmol/l	126	101	151	12.5	25.0	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.16	5.24	7.08	0.460	0.920	Hexokinase
	mg/dl	111	94.4	128	8.50	17.0	
HDL-Cholesterol	mmol/l	1.32	1.12	1.52	0.100	0.200	Direct HDL, Roche 4th gen.
	mg/dl	51.0	43.4	58.6	3.80	7.60	
LD (LDH)	U/l	218	185	251	16.5	33.0	L to P IFCC
Magnesium	mmol/l	0.936	0.824	1.05	0.057	0.114	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.135	0.270	
Triglycerides	mmol/l	1.08	0.907	1.25	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.70	15.4	
Urea	mmol/l	7.11	6.04	8.18	0.535	1.07	Urease, kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mg/dl (BUN)	19.9	16.9	22.9	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.350	0.305	0.395	0.023	0.045	Uricase perox. no ascorb. ox.
	mg/dl	5.88	5.12	6.64	0.380	0.760	

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Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mmol/l	0.349	0.304	0.394	0.023	0.045	Uricase Perox. with ascorb. ox
	mg/dl	5.86	5.10	6.62	0.380	0.760	
	mmol/l	0.346	0.301	0.391	0.023	0.045	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.81	5.05	6.57	0.380	0.760	

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Roche Cobas c303/c503

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/l	40.5	34.4	46.6	3.05	6.10	Bromocresol Green
	g/dl	4.05	3.44	4.66	0.305	0.610	
Alkaline Phosphatase	U/l	159	135	183	12.0	24.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P
Amylase, Pancreatic	U/l	58	49	67	4.50	9.00	Immunoinhibition, EPS substrate
Amylase, Total	U/l	84	71	97	6.50	13.0	Roche Integra 2-chloro-pNPG7
	U/l	85	72	98	6.50	13.0	Roche liquid stable pNPG7
AST (GOT)	U/l	47	38	56	4.50	9.00	Tris buffer without P5P
Bicarbonate	mmol/l	13.3	10.5	16.1	1.40	2.80	Enzymatic
Bile Acids	µmol/l	22.5	18.0	27.0	2.25	4.50	Enzymatic Colorimetric
Bilirubin, Direct	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	0.959	0.758	1.16	0.101	0.201	Roche DPD Doumas standardised
	µmol/l	16.4	13.0	19.8	1.70	3.40	
	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	1.58	1.25	1.91	0.165	0.330	Diazo with Sulphanilic Acid
	µmol/l	27.0	21.3	32.7	2.85	5.70	
	mg/dl	1.57	1.24	1.90	0.165	0.330	Diazonium ion
	µmol/l	26.8	21.2	32.4	2.80	5.60	
	mg/dl	1.57	1.24	1.90	0.165	0.330	Dichlorophenyl Diazonium
	µmol/l	26.8	21.2	32.4	2.80	5.60	
Calcium	mmol/l	2.15	1.94	2.36	0.105	0.210	Cresolphthalein complexone
	mg/dl	8.62	7.76	9.48	0.430	0.860	
	mmol/l	2.17	1.95	2.39	0.110	0.220	NM-BAPTA
	mg/dl	8.70	7.83	9.57	0.435	0.870	
Chloride	mmol/l	95.4	87.8	103	3.80	7.60	ISE, indirect
Cholesterol	mmol/l	3.98	3.46	4.50	0.260	0.520	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.0	20.0	
	mmol/l	3.98	3.46	4.50	0.260	0.520	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.0	20.0	
Cholinesterase	U/l	5748	4598	6898	575	1150	Colorimetric - Butyrylthiocholine
CK, Total	U/l	194	159	229	17.5	35.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	124	99.2	149	12.5	25.0	

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Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	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	51	43	59	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	55	47	63	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.05	5.14	6.96	0.455	0.910	Hexokinase
	mg/dl	109	92.7	125	8.00	16.0	
HDL-Cholesterol	mmol/l	1.33	1.13	1.53	0.100	0.200	Direct HDL, Roche 4th gen.
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric with ppt.
	µg/dl	111	91.0	131	10.0	20.0	
	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.2	130	10.0	20.0	
Lactate	mmol/l	1.52	1.25	1.79	0.135	0.270	Colorimetric - Lactate oxidase
	mg/dl	13.7	11.2	16.2	1.25	2.50	
LD (LDH)	U/l	213	181	245	16.0	32.0	L to P IFCC
Lipase	U/l	38	30	46	4.00	8.00	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	38	30	46	4.00	8.00	Colorimetric Roche ACN(8)789/ID 0-052
Lithium	mmol/l	1.04	0.915	1.17	0.065	0.130	Spectrophotometric
	mg/dl	0.722	0.635	0.809	0.044	0.087	
Magnesium	mmol/l	0.957	0.842	1.07	0.057	0.113	Chlorphosphonazo III
	mg/dl	2.33	2.05	2.61	0.140	0.280	
	mmol/l	0.959	0.844	1.07	0.056	0.111	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.140	0.280	
Osmolality	mOsm/kg	302	242	362	30.0	60.0	Calculated
Phosphate, Inorganic	mmol/l	1.71	1.45	1.97	0.130	0.260	Phosphomolybdate UV
	mg/dl	5.30	4.51	6.09	0.395	0.790	
Potassium	mmol/l	3.97	3.65	4.29	0.160	0.320	ISE method - indirect
Protein, Total	g/l	56.1	44.9	67.3	5.60	11.2	Biuret reaction, end point
	g/dl	5.61	4.49	6.73	0.560	1.12	
	g/l	56.1	44.9	67.3	5.60	11.2	Biuret reaction, kinetic
	g/dl	5.61	4.49	6.73	0.560	1.12	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.7	36.9	56.5	4.90	9.80	Calculated from Transferrin
	µg/dl	261	206	316	27.5	55.0	
	µmol/l	43.1	34.0	52.2	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	241	190	292	25.5	51.0	

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Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Triglycerides	mmol/l	1.09	0.916	1.26	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.75	15.5	
Urea	mmol/l	7.26	6.17	8.35	0.545	1.09	Urease, kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mg/dl (BUN)	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.340	0.296	0.384	0.022	0.044	Uricase perox. no ascorb. ox.
	mg/dl	5.71	4.97	6.45	0.370	0.740	
	mmol/l	0.341	0.297	0.385	0.022	0.044	Uricase Perox. with ascorb. ox
	mg/dl	5.73	4.99	6.47	0.370	0.740	
	mmol/l	0.344	0.299	0.389	0.023	0.045	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.78	5.03	6.53	0.375	0.750	

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.305	0.610	
Alkaline Phosphatase	U/l	170	145	195	12.5	25.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P
Amylase, Total	U/l	86	73	99	6.50	13.0	Roche liquid stable pNPG7
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P
Bilirubin, Direct	mg/dl	1.23	0.972	1.49	0.130	0.260	Dichlorophenyl Diazonium
	µmol/l	21.0	16.6	25.4	2.20	4.40	
	mg/dl	1.04	0.822	1.26	0.110	0.220	Roche DPD Doumas standardised
	µmol/l	17.7	14.0	21.4	1.85	3.70	
	mg/dl	1.25	0.988	1.51	0.130	0.260	Roche DPD JG standardised
	µmol/l	21.4	16.9	25.9	2.25	4.50	
Bilirubin, Total	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	1.64	1.30	1.98	0.170	0.340	Dichlorophenyl Diazonium
	µmol/l	28.1	22.2	34.0	2.95	5.90	
Calcium	mmol/l	2.18	1.96	2.40	0.110	0.220	NM-BAPTA
	mg/dl	8.74	7.87	9.61	0.435	0.870	
Chloride	mmol/l	96.0	88.3	104	4.00	8.00	ISE, indirect
Cholesterol	mmol/l	4.01	3.49	4.53	0.260	0.520	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.0	20.0	
	mmol/l	4.05	3.52	4.58	0.265	0.530	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.0	20.0	
CK, Total	U/l	200	164	236	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	1.36	1.09	1.63	0.135	0.270	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.49	1.19	1.79	0.150	0.300	Roche Creatinine Plus
	µmol/l	132	106	158	13.0	26.0	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.13	5.21	7.05	0.460	0.920	Hexokinase
	mg/dl	110	93.5	127	8.50	17.0	
HDL-Cholesterol	mmol/l	1.32	1.12	1.52	0.100	0.200	Direct HDL, Roche 4th gen.
	mg/dl	51.0	43.4	58.6	3.80	7.60	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.0	131	10.0	20.0	

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Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Lactate	mmol/l	1.51	1.24	1.78	0.135	0.270	Colorimetric - Lactate oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	213	181	245	16.0	32.0	L to P IFCC
Lipase	U/l	37	30	44	3.50	7.00	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	38	30	46	4.00	8.00	Colorimetric Roche ACN(8)789/ID 0-052
Magnesium	mmol/l	0.950	0.836	1.06	0.055	0.110	Xylidyl Blue
	mg/dl	2.31	2.03	2.59	0.140	0.280	
Phosphate, Inorganic	mmol/l	1.73	1.47	1.99	0.130	0.260	Phosphomolybdate UV
	mg/dl	5.36	4.56	6.16	0.400	0.800	
Potassium	mmol/l	4.00	3.68	4.32	0.160	0.320	ISE method - indirect
Protein, Total	g/l	56.7	45.4	68.0	5.65	11.3	Biuret reaction, end point
	g/dl	5.67	4.54	6.80	0.565	1.13	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.5	35.2	53.8	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	249	197	301	26.0	52.0	
Triglycerides	mmol/l	1.09	0.916	1.26	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.75	15.5	
Urea	mmol/l	7.48	6.36	8.60	0.560	1.12	Urease, kinetic
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mg/dl (BUN)	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.348	0.303	0.393	0.023	0.045	Uricase perox. no ascorb. ox.
	mg/dl	5.85	5.09	6.61	0.380	0.760	
	mmol/l	0.348	0.303	0.393	0.023	0.045	Uricase Perox. with ascorb. ox
	mg/dl	5.85	5.09	6.61	0.380	0.760	
	mmol/l	0.350	0.305	0.395	0.023	0.045	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.88	5.12	6.64	0.380	0.760	

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Size: 20 x 5ml / 5 x 5ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Green
	g/dl	4.07	3.46	4.68	0.305	0.610	
	g/l	40.7	34.6	46.8	3.05	6.10	Bromocresol Purple
	g/dl	4.07	3.46	4.68	0.305	0.610	
Alkaline Phosphatase	U/l	172	146	198	13.0	26.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P
Amylase, Pancreatic	U/l	59	50	68	4.50	9.00	Roche liquid stable pNPG7
Amylase, Total	U/l	84	71	97	6.50	13.0	Roche Integra 2-chloro-pNPG7
	U/l	84	71	97	6.50	13.0	Roche liquid stable pNPG7
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P
Bicarbonate	mmol/l	13.0	10.3	15.7	1.35	2.70	Enzymatic
	mmol/l	13.1	10.4	15.8	1.35	2.70	PEP Carboxylase
Bile Acids	µmol/l	23.6	18.9	28.3	2.35	4.70	Enzymatic Colorimetric
Bilirubin, Direct	mg/dl	1.21	0.956	1.46	0.125	0.250	Diazo with Sulphanilic Acid
	µmol/l	20.6	16.3	24.9	2.15	4.30	
	mg/dl	1.18	0.932	1.43	0.125	0.250	Dichlorophenyl Diazonium
	µmol/l	20.2	16.0	24.4	2.10	4.20	
	mg/dl	0.936	0.739	1.13	0.097	0.194	Roche (US calibrator only)
	µmol/l	16.0	12.6	19.4	1.70	3.40	
	mg/dl	1.19	0.940	1.44	0.125	0.250	Roche DPD JG standardised
	µmol/l	20.3	16.0	24.6	2.15	4.30	
Bilirubin, Total	mg/dl	1.65	1.30	2.00	0.175	0.350	Diazo with Sulphanilic Acid
	µmol/l	28.2	22.3	34.1	2.95	5.90	
	mg/dl	1.61	1.27	1.95	0.170	0.340	Diazonium ion
	µmol/l	27.5	21.7	33.3	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	mmol/l	2.16	1.94	2.38	0.110	0.220	Cresolphthalein complexone
	mg/dl	8.66	7.79	9.53	0.435	0.870	
	mmol/l	2.17	1.95	2.39	0.110	0.220	NM-BAPTA
	mg/dl	8.70	7.83	9.57	0.435	0.870	
Chloride	mmol/l	95.1	87.5	103	3.95	7.90	ISE, indirect
Cholesterol	mmol/l	3.96	3.45	4.47	0.255	0.510	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.0	20.0	
	mmol/l	3.97	3.45	4.49	0.260	0.520	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.0	20.0	
Cholinesterase	U/l	5676	4541	6811	568	1135	Colorimetric - Butyrylthiocholine
CK, Total	U/l	197	162	232	17.5	35.0	CK-NAC (IFCC)

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RANDOX

Roche Cobas c501/c502

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
CK, Total	U/l	194	159	229	17.5	35.0	CK-NAC substrate start (DGKC)
	U/l	199	163	235	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	1.37	1.10	1.64	0.135	0.270	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.38	1.10	1.66	0.140	0.280	Jaffe rate comp. (-18umol/l)
	µmol/l	122	97.6	146	12.0	24.0	
	mg/dl	1.48	1.18	1.78	0.150	0.300	Roche Creatinine Plus
	µmol/l	131	105	157	13.0	26.0	
D-3-Hydroxybutyrate	mmol/l	0.300	0.255	0.345	0.023	0.045	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
	U/l	54	46	62	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer
Glucose	mmol/l	6.06	5.15	6.97	0.455	0.910	Hexokinase
	mg/dl	109	92.7	125	8.00	16.0	
HDL-Cholesterol	mmol/l	1.31	1.11	1.51	0.100	0.200	Direct HDL, Roche 4th gen.
	mg/dl	50.6	43.0	58.2	3.80	7.60	
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric with ppt.
	µg/dl	112	91.8	132	10.0	20.0	
	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	91.8	132	10.0	20.0	
Lactate	mmol/l	1.54	1.26	1.82	0.140	0.280	Colorimetric - Lactate oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	213	181	245	16.0	32.0	L to P IFCC
Lipase	U/l	38	30	46	4.00	8.00	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	38	30	46	4.00	8.00	Colorimetric Roche ACN(8)789/ID 0-052
Lithium	mmol/l	0.977	0.860	1.09	0.057	0.113	Spectrophotometric
	mg/dl	0.678	0.597	0.759	0.041	0.081	
Magnesium	mmol/l	0.953	0.839	1.07	0.059	0.117	Chlorphosphonazo III
	mg/dl	2.32	2.04	2.60	0.140	0.280	
	mmol/l	0.949	0.835	1.06	0.056	0.111	Xylidyl Blue
	mg/dl	2.31	2.03	2.59	0.140	0.280	
Phosphate, Inorganic	mmol/l	1.70	1.45	1.95	0.125	0.250	Phosphomolybdate enzymatic
	mg/dl	5.27	4.48	6.06	0.395	0.790	
	mmol/l	1.70	1.45	1.95	0.125	0.250	Phosphomolybdate UV
	mg/dl	5.27	4.48	6.06	0.395	0.790	
Potassium	mmol/l	3.97	3.65	4.29	0.160	0.320	ISE method - indirect

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Roche Cobas c501/c502

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Protein, Total	g/l	56.1	44.9	67.3	5.60	11.2	Biuret reaction, end point
	g/dl	5.61	4.49	6.73	0.560	1.12	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.6	38.4	58.8	5.10	10.2	Calculated from Transferrin
	µg/dl	272	215	329	28.5	57.0	
	µmol/l	42.2	33.3	51.1	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	236	186	286	25.0	50.0	
Triglycerides	mmol/l	1.08	0.907	1.25	0.085	0.170	Lipase/GK UV. no correction
	mg/dl	95.6	80.3	111	7.70	15.4	
	mmol/l	1.08	0.907	1.25	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.70	15.4	
Urea	mmol/l	7.35	6.25	8.45	0.550	1.10	Urease, kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mg/dl (BUN)	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.339	0.295	0.383	0.022	0.044	Uricase perox. no ascorb. ox.
	mg/dl	5.70	4.96	6.44	0.370	0.740	
	mmol/l	0.338	0.294	0.382	0.022	0.044	Uricase Perox. with ascorb. ox
	mg/dl	5.68	4.94	6.42	0.370	0.740	
	mmol/l	0.343	0.298	0.388	0.023	0.045	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.76	5.01	6.51	0.375	0.750	

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Roche Cobas c701/c702/c711

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.305	0.610	
	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Purple
	g/dl	4.09	3.48	4.70	0.305	0.610	
Alkaline Phosphatase	U/l	174	148	200	13.0	26.0	Colorimetric
	U/l	169	144	194	12.5	25.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	35	28	42	3.50	7.00	Colorimetric
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P
Amylase, Total	U/l	84	71	97	6.50	13.0	Roche liquid stable pNPG7
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P
Bicarbonate	mmol/l	13.2	10.5	15.9	1.35	2.70	Enzymatic
Bile Acids	µmol/l	24.9	19.9	29.9	2.50	5.00	Enzymatic Colorimetric
Bilirubin, Direct	mg/dl	1.21	0.956	1.46	0.125	0.250	Dichlorophenyl Diazonium
	µmol/l	20.6	16.3	24.9	2.15	4.30	
	mg/dl	1.02	0.806	1.23	0.105	0.210	Oxidation to Biliverdin/Vanadate
	µmol/l	17.5	13.8	21.2	1.85	3.70	
	mg/dl	0.948	0.749	1.15	0.101	0.202	Roche DPD Doumas standardised
	µmol/l	16.2	12.8	19.6	1.70	3.40	
	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	1.62	1.28	1.96	0.170	0.340	Diazonium ion
	µmol/l	27.7	21.9	33.5	2.90	5.80	
	mg/dl	1.63	1.29	1.97	0.170	0.340	Dichlorophenyl Diazonium
	µmol/l	27.9	22.0	33.8	2.95	5.90	
Calcium	mmol/l	2.15	1.94	2.36	0.105	0.210	Cresolphthalein complexone
	mg/dl	8.62	7.76	9.48	0.430	0.860	
	mmol/l	2.16	1.94	2.38	0.110	0.220	NM-BAPTA
	mg/dl	8.66	7.79	9.53	0.435	0.870	
Chloride	mmol/l	95.4	87.8	103	3.80	7.60	ISE, indirect
Cholesterol	mmol/l	3.90	3.39	4.41	0.255	0.510	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.0	20.0	
	mmol/l	3.97	3.45	4.49	0.260	0.520	Cholesterol Oxidase - IDMS
	mg/dl	153	133	173	10.0	20.0	
Cholinesterase	U/l	5725	4580	6870	573	1145	Colorimetric - Butyrylthiocholine
CK, Total	U/l	199	163	235	18.0	36.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.38	1.10	1.66	0.140	0.280	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	122	97.6	146	12.0	24.0	
	mg/dl	1.49	1.19	1.79	0.150	0.300	Roche Creatinine Plus
	µmol/l	132	106	158	13.0	26.0	

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Roche Cobas c701/c702/c711

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
	U/l	54	46	62	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.01	5.11	6.91	0.450	0.900	Hexokinase
	mg/dl	108	91.8	124	8.00	16.0	
HDL-Cholesterol	mmol/l	1.30	1.11	1.49	0.095	0.190	Direct HDL, Roche 4th gen.
	mg/dl	50.2	42.7	57.7	3.75	7.50	
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric with ppt.
	µg/dl	110	90.2	130	10.0	20.0	
	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.2	130	10.0	20.0	
Lactate	mmol/l	1.51	1.24	1.78	0.135	0.270	Colorimetric - Lactate oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	211	179	243	16.0	32.0	L to P IFCC
Lipase	U/l	39	31	47	4.00	8.00	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	39	31	47	4.00	8.00	Colorimetric Roche ACN(8)789/ID 0-052
Lithium	mmol/l	0.978	0.861	1.10	0.061	0.122	Spectrophotometric
	mg/dl	0.679	0.598	0.760	0.041	0.081	
Magnesium	mmol/l	0.958	0.843	1.07	0.056	0.112	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.140	0.280	
Phosphate, Inorganic	mmol/l	1.69	1.44	1.94	0.125	0.250	Phosphomolybdate UV
	mg/dl	5.24	4.45	6.03	0.395	0.790	
Potassium	mmol/l	3.94	3.62	4.26	0.160	0.320	ISE method - indirect
Protein, Total	g/l	56.1	44.9	67.3	5.60	11.2	Biuret reaction, end point
	g/dl	5.61	4.49	6.73	0.560	1.12	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.6	33.7	51.5	4.45	8.90	Calculated from Transferrin
	µg/dl	238	188	288	25.0	50.0	
	µmol/l	43.3	34.2	52.4	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	242	191	293	25.5	51.0	
Triglycerides	mmol/l	1.07	0.899	1.24	0.085	0.170	Lipase/GK UV. no correction
	mg/dl	94.7	79.5	110	7.65	15.3	
	mmol/l	1.08	0.907	1.25	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.70	15.4	
Urea	mmol/l	7.26	6.17	8.35	0.545	1.09	Urease, kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mg/dl (BUN)	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.339	0.295	0.383	0.022	0.044	Uricase perox. no ascorb. ox.
	mg/dl	5.70	4.96	6.44	0.370	0.740	

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Roche Cobas c701/c702/c711

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mmol/l	0.335	0.291	0.379	0.022	0.044	Uricase Perox. with ascorb. ox
	mg/dl	5.63	4.90	6.36	0.365	0.730	
	mmol/l	0.339	0.295	0.383	0.022	0.044	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	5.70	4.96	6.44	0.370	0.740	

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Roche Cobas e402/ e801

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	pmol/l	21.8	16.4	27.2	2.70	5.40	Roche Cobas e402/e801
	pg/ml	17.0	12.8	21.2	2.10	4.20	
	ng/dl	1.70	1.28	2.12	0.210	0.420	
PSA, Total	ng/ml	12.3	9.23	15.4	1.55	3.10	Roche Cobas e402/e801
Thyroid Stimulating Hormone (TSH)	µU/ml	1.59	1.27	1.91	0.160	0.320	Roche Cobas e402/e801

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Roche Cobas e411

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	pmol/l	21.0	15.8	26.2	2.60	5.20	Roche Cobas 4000/e411
	pg/ml	16.4	12.3	20.5	2.05	4.10	
	ng/dl	1.64	1.23	2.05	0.205	0.410	
PSA, Total	ng/ml	12.9	9.68	16.1	1.60	3.20	Roche Cobas 4000/e411
Thyroid Stimulating Hormone (TSH)	µU/ml	1.70	1.36	2.04	0.170	0.340	Roche Cobas 4000/e411
Total T3	nmol/l	2.62	1.97	3.27	0.325	0.650	Roche Cobas 4000/e411
	ng/ml	1.71	1.28	2.14	0.215	0.430	
	ng/dl	171	128	214	21.5	43.0	
Total T4	nmol/l	92.4	69.3	116	11.8	23.6	Roche Cobas 4000/e411
	ng/ml	72.1	54.1	90.1	9.00	18.0	
	µg/dl	7.21	5.41	9.01	0.900	1.80	

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Roche Cobas e601/602

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Free T4	pmol/l	21.3	16.0	26.6	2.65	5.30	Roche Cobas e601/ 602
	pg/ml	16.6	12.5	20.7	2.05	4.10	
	ng/dl	1.66	1.25	2.07	0.205	0.410	
PSA, Total	ng/ml	12.6	9.45	15.8	1.60	3.20	Roche Cobas e601/602
Thyroid Stimulating Hormone (TSH)	µU/ml	1.65	1.32	1.98	0.165	0.330	Roche Cobas e601/ 602

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Roche Integra

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml Range

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.310	0.620	
Alkaline Phosphatase	U/l	173	147	199	13.0	26.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P
Amylase, Total	U/l	84	71	97	6.50	13.0	BM/Roche Colorimetric pNPG7
	U/l	86	73	99	6.50	13.0	Roche Integra 2-chloro-pNPG7
	U/l	85	72	98	6.50	13.0	Roche liquid stable pNPG7
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P
Bilirubin, Direct	mg/dl	1.18	0.932	1.43	0.125	0.250	Diazo with Sulphanilic Acid
	µmol/l	20.2	16.0	24.4	2.10	4.20	
	mg/dl	1.22	0.964	1.48	0.130	0.260	Dichlorophenyl Diazonium
	µmol/l	20.9	16.5	25.3	2.20	4.40	
	mg/dl	1.21	0.956	1.46	0.125	0.250	Roche DPD JG standardised
	µmol/l	20.6	16.3	24.9	2.15	4.30	
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	1.61	1.27	1.95	0.170	0.340	Diazonium ion
	µmol/l	27.6	21.8	33.4	2.90	5.80	
	mg/dl	1.66	1.31	2.01	0.175	0.350	Dichlorophenyl Diazonium
	µmol/l	28.3	22.4	34.2	2.95	5.90	
Calcium	mmol/l	2.15	1.94	2.36	0.105	0.210	Cresolphthalein complexone
	mg/dl	8.62	7.76	9.48	0.430	0.860	
	mmol/l	2.15	1.94	2.36	0.105	0.210	NM-BAPTA
	mg/dl	8.62	7.76	9.48	0.430	0.860	
Chloride	mmol/l	98.3	90.4	106	3.85	7.70	ISE, indirect
Cholesterol	mmol/l	3.94	3.43	4.45	0.255	0.510	Cholesterol Oxidase - Abell Kendall
	mg/dl	152	132	172	10.0	20.0	
	mmol/l	3.86	3.36	4.36	0.250	0.500	Cholesterol Oxidase - IDMS
	mg/dl	149	130	168	9.50	19.0	
CK, Total	U/l	195	160	230	17.5	35.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.33	1.06	1.60	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	118	94.4	142	12.0	24.0	
	mg/dl	1.32	1.06	1.58	0.130	0.260	Alkaline picrate with deproteinisation
	µmol/l	117	93.6	140	11.5	23.0	
	mg/dl	1.36	1.09	1.63	0.135	0.270	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	120	96.0	144	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	

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Roche Integra

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	mg/dl	1.41	1.13	1.69	0.140	0.280	Roche Creatinine Plus
	µmol/l	125	100	150	12.5	25.0	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
	U/l	54	46	62	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.16	5.24	7.08	0.460	0.920	Hexokinase
	mg/dl	111	94.4	128	8.50	17.0	
HDL-Cholesterol	mmol/l	1.31	1.11	1.51	0.100	0.200	Direct HDL, Roche 4th gen.
	mg/dl	50.6	43.0	58.2	3.80	7.60	
Iron	µmol/l	20.4	16.7	24.1	1.85	3.70	Colorimetric with ppt.
	µg/dl	114	93.5	135	10.5	21.0	
	µmol/l	20.5	16.8	24.2	1.85	3.70	Colorimetric without ppt.
	µg/dl	115	94.3	136	10.5	21.0	
Lactate	mmol/l	1.55	1.27	1.83	0.140	0.280	Colorimetric - Lactate oxidase
	mg/dl	14.0	11.5	16.5	1.25	2.50	
LD (LDH)	U/l	217	184	250	16.5	33.0	L to P IFCC
Lipase	U/l	39	31	47	4.00	8.00	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	39	31	47	4.00	8.00	Colorimetric Roche ACN(8)789/ID 0-052
Magnesium	mmol/l	0.960	0.845	1.08	0.060	0.120	Chlorphosphonazo III
	mg/dl	2.33	2.05	2.61	0.140	0.280	
	mmol/l	0.953	0.839	1.07	0.059	0.117	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.140	0.280	
Phosphate, Inorganic	mmol/l	1.77	1.50	2.04	0.135	0.270	Phosphomolybdate enzymatic
	mg/dl	5.49	4.67	6.31	0.410	0.820	
	mmol/l	1.75	1.49	2.01	0.130	0.260	Phosphomolybdate UV
	mg/dl	5.43	4.62	6.24	0.405	0.810	
Potassium	mmol/l	3.90	3.59	4.21	0.155	0.310	ISE method - indirect
Protein, Total	g/l	54.2	43.4	65.0	5.40	10.8	Biuret reaction, end point
	g/dl	5.42	4.34	6.50	0.540	1.08	
	g/l	54.1	43.3	64.9	5.40	10.8	Biuret reaction, kinetic
	g/dl	5.41	4.33	6.49	0.540	1.08	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	44.8	35.4	54.2	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	250	198	302	26.0	52.0	
Triglycerides	mmol/l	1.08	0.907	1.25	0.085	0.170	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.3	111	7.70	15.4	
Urea	mmol/l	7.09	6.03	8.15	0.530	1.06	Urease, kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mg/dl (BUN)	19.9	16.9	22.9	1.50	3.00	

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Roche Integra

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Uric Acid (Urate)	mmol/l	0.355	0.309	0.401	0.023	0.046	Uricase perox. no ascorb. ox.
	mg/dl	5.96	5.19	6.73	0.385	0.770	
	mmol/l	0.350	0.305	0.395	0.023	0.045	Uricase Perox. with ascorb. ox
	mg/dl	5.88	5.12	6.64	0.380	0.760	

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Sensa Core ST series

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Potassium	mmol/l	3.71	3.41	4.01	0.150	0.300	ISE method - direct

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Siemens ADVIA Chemistry Instruments

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	39.0	33.2	44.8	2.90	5.80	Bromocresol Green
	g/dl	3.90	3.32	4.48	0.290	0.580	
Alkaline Phosphatase	U/l	160	136	184	12.0	24.0	AMP optimised to IFCC
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P
Amylase, Total	U/l	85	72	98	6.50	13.0	Siemens - blocked pNPG7
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P
Bicarbonate	mmol/l	14.8	11.7	17.9	1.55	3.10	Enzymatic
Bilirubin, Direct	mg/dl	1.14	0.901	1.38	0.120	0.240	Oxidation to Biliverdin/Vanadate
	µmol/l	19.5	15.4	23.6	2.05	4.10	
Bilirubin, Total	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	mmol/l	2.08	1.87	2.29	0.105	0.210	Cresolphthalein complexone
	mg/dl	8.34	7.51	9.17	0.415	0.830	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE, indirect
Cholesterol	mmol/l	3.96	3.45	4.47	0.255	0.510	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.0	20.0	
CK, Total	U/l	196	161	231	17.5	35.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.37	1.10	1.64	0.135	0.270	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	121	96.8	145	12.0	24.0	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	5.94	5.05	6.83	0.445	0.890	Glucose oxidase
	mg/dl	107	91.0	123	8.00	16.0	
	mmol/l	5.89	5.01	6.77	0.440	0.880	Hexokinase
	mg/dl	106	90.1	122	8.00	16.0	
HDL-Cholesterol	mmol/l	1.15	0.978	1.32	0.085	0.170	Direct HDL, Clearance method
	mg/dl	44.4	37.7	51.1	3.35	6.70	
Iron	µmol/l	19.7	16.2	23.2	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.2	130	10.0	20.0	
Lactate	mmol/l	1.39	1.14	1.64	0.125	0.250	Colorimetric - Lactate oxidase
	mg/dl	12.5	10.3	14.7	1.10	2.20	
LD (LDH)	U/l	216	184	248	16.0	32.0	L to P IFCC
Magnesium	mmol/l	0.897	0.789	1.01	0.057	0.113	Xylidyl Blue
	mg/dl	2.18	1.92	2.44	0.130	0.260	
Phosphate, Inorganic	mmol/l	1.73	1.47	1.99	0.130	0.260	Phosphomolybdate UV
	mg/dl	5.36	4.56	6.16	0.400	0.800	
Potassium	mmol/l	3.97	3.65	4.29	0.160	0.320	ISE method - indirect
Protein, Total	g/l	55.2	44.2	66.2	5.50	11.0	Biuret reaction, end point
	g/dl	5.52	4.42	6.62	0.550	1.10	

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Siemens ADVIA Chemistry Instruments

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.941	1.30	0.090	0.180	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.9	
Urea	mmol/l	7.67	6.52	8.82	0.575	1.15	Urease, kinetic
	mg/dl	46.1	39.2	53.0	3.45	6.90	
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.352	0.306	0.398	0.023	0.046	Uricase perox. no ascorb. ox.
	mg/dl	5.91	5.14	6.68	0.385	0.770	

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Siemens Atellica Solution

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	38.8	33.0	44.6	2.90	5.80	Bromocresol Green
	g/dl	3.88	3.30	4.46	0.290	0.580	
	g/l	39.6	33.7	45.5	2.95	5.90	Bromocresol Purple
	g/dl	3.96	3.37	4.55	0.295	0.590	
Alkaline Phosphatase	U/l	166	141	191	12.5	25.0	AMP optimised to IFCC
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P
Amylase, Pancreatic	U/l	67	57	77	5.00	10.0	Immunoinhibition, EPS substrate
Amylase, Total	U/l	94	80	108	7.00	14.0	Siemens - blocked pNPG7
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bile Acids	µmol/l	21.1	16.9	25.3	2.10	4.20	Enzymatic Colorimetric - Sentinel
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	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	mmol/l	2.18	1.96	2.40	0.110	0.220	Arsenazo III
	mg/dl	8.74	7.87	9.61	0.435	0.870	
	mmol/l	2.09	1.88	2.30	0.105	0.210	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.420	0.840	
Chloride	mmol/l	102	93.8	110	4.00	8.00	ISE, indirect
Cholesterol	mmol/l	4.01	3.49	4.53	0.260	0.520	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.0	20.0	
	mmol/l	4.00	3.48	4.52	0.260	0.520	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.0	20.0	
Cholinesterase	U/l	7832	6266	9398	783	1566	Colorimetric - Butyrylthiocholine
CK, Total	U/l	197	162	232	17.5	35.0	CK-NAC (IFCC)
Creatinine	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	
	mg/dl	1.34	1.07	1.61	0.135	0.270	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	119	95.2	143	12.0	24.0	
Free T4	pmol/l	17.2	12.9	21.5	2.15	4.30	Siemens Atellica IM
	pg/ml	13.4	10.1	16.7	1.65	3.30	
	ng/dl	1.34	1.01	1.67	0.165	0.330	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.10	5.19	7.01	0.455	0.910	Glucose oxidase
	mg/dl	110	93.5	127	8.50	17.0	
	mmol/l	6.01	5.11	6.91	0.450	0.900	Hexokinase
	mg/dl	108	91.8	124	8.00	16.0	

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Siemens Atellica Solution

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
HDL-Cholesterol	mmol/l	1.50	1.28	1.72	0.110	0.220	Direct HDL, Clearance method
	mg/dl	57.9	49.2	66.6	4.35	8.70	
	mmol/l	1.51	1.28	1.74	0.115	0.230	HDL Ultra/Accel Selective Detergent
	mg/dl	58.3	49.6	67.0	4.35	8.70	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.0	131	10.0	20.0	
Lactate	mmol/l	1.48	1.21	1.75	0.135	0.270	Colorimetric - Lactate oxidase
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	212	180	244	16.0	32.0	L to P IFCC
	U/l	212	180	244	16.0	32.0	Siemens Dimension L-P Non IFCC
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric
Magnesium	mmol/l	0.918	0.808	1.03	0.056	0.112	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.135	0.270	
Phosphate, Inorganic	mmol/l	1.76	1.50	2.02	0.130	0.260	Phosphomolybdate UV
	mg/dl	5.46	4.64	6.28	0.410	0.820	
Potassium	mmol/l	3.88	3.57	4.19	0.155	0.310	ISE method - indirect
Protein, Total	g/l	56.7	45.4	68.0	5.65	11.3	Biuret reaction, end point
	g/dl	5.67	4.54	6.80	0.565	1.13	
PSA, Total	ng/ml	11.3	8.48	14.1	1.40	2.80	Siemens Atellica IM
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone (TSH)	µU/ml	1.41	1.13	1.69	0.140	0.280	Siemens Atellica IM
TIBC	µmol/l	49.4	39.0	59.8	5.20	10.4	Direct Colorimetric
	µg/dl	276	218	334	29.0	58.0	
Triglycerides	mmol/l	1.13	0.949	1.31	0.090	0.180	Lipase/GPO-PAP no correction
	mg/dl	100	84.0	116	8.00	16.0	
	mmol/l	1.14	0.958	1.32	0.090	0.180	Siemens Atellica IM
	mg/dl	101	84.8	117	8.00	16.0	
Urea	mmol/l	7.73	6.57	8.89	0.580	1.16	Urease, kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.353	0.307	0.399	0.023	0.046	Uricase perox. no ascorb. ox.
	mg/dl	5.93	5.16	6.70	0.385	0.770	
	mmol/l	0.347	0.302	0.392	0.023	0.045	Uricase Perox. with ascorb. ox
	mg/dl	5.83	5.07	6.59	0.380	0.760	

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Siemens Dimension EXL/200

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Purple
	g/dl	4.02	3.42	4.62	0.300	0.600	
Alkaline Phosphatase	U/l	173	147	199	13.0	26.0	Siemens Dimension AMP buffer
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P
Amylase, Total	U/l	88	75	101	6.50	13.0	Siemens 2-chloro-pNPG3
AST (GOT)	U/l	44	35	53	4.50	9.00	Siemens/Dade standard non IFCC corr.
	U/l	44	35	53	4.50	9.00	Tris buffer with P5P
Bilirubin, Direct	mg/dl	0.807	0.638	0.976	0.085	0.169	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	13.8	10.9	16.7	1.45	2.90	
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	mmol/l	2.07	1.86	2.28	0.105	0.210	Cresolphthalein complexone
	mg/dl	8.30	7.47	9.13	0.415	0.830	
Chloride	mmol/l	95.2	87.6	103	3.90	7.80	ISE, indirect
Cholesterol	mmol/l	3.59	3.12	4.06	0.235	0.470	Siemens Dimension
	mg/dl	139	121	157	9.00	18.0	
CK, Total	U/l	192	157	227	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	1.45	1.16	1.74	0.145	0.290	Jaffe rate blanked
	µmol/l	128	102	154	13.0	26.0	
gamma-GT	U/l	58	49	67	4.50	9.00	Gamma glut`3-carb`4-nitro(IFCC)
	U/l	68	58	78	5.00	10.0	Siemens Dimension
Glucose	mmol/l	6.28	5.34	7.22	0.470	0.940	Hexokinase
	mg/dl	113	96.1	130	8.50	17.0	
HDL-Cholesterol	mmol/l	1.41	1.20	1.62	0.105	0.210	Direct HDL, PEGME
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.3	123	9.50	19.0	
LD (LDH)	U/l	201	171	231	15.0	30.0	L to P IFCC
Lipase	U/l	41	33	49	4.00	8.00	Colorimetric Dimension (LIP Kit)
Magnesium	mmol/l	0.927	0.816	1.04	0.057	0.113	Methylthymol blue
	mg/dl	2.25	1.98	2.52	0.135	0.270	
Phosphate, Inorganic	mmol/l	1.81	1.54	2.08	0.135	0.270	Phosphomolybdate enzymatic
	mg/dl	5.61	4.77	6.45	0.420	0.840	
	mmol/l	1.78	1.51	2.05	0.135	0.270	Phosphomolybdate UV
	mg/dl	5.52	4.69	6.35	0.415	0.830	
Potassium	mmol/l	3.86	3.55	4.17	0.155	0.310	ISE method - indirect

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

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Siemens Dimension EXL/200

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Protein, Total	g/l	57.8	46.2	69.4	5.80	11.6	Biuret reaction, end point
	g/dl	5.78	4.62	6.94	0.580	1.16	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.02	0.857	1.18	0.080	0.160	Lipase/GPO-PAP no correction
	mg/dl	90.3	75.9	105	7.35	14.7	
	mmol/l	0.972	0.816	1.13	0.079	0.158	Siemens Dimension
	mg/dl	86.0	72.2	99.8	6.90	13.8	
Urea	mmol/l	7.47	6.35	8.59	0.560	1.12	Urease, kinetic
	mg/dl	44.9	38.2	51.6	3.35	6.70	
	mg/dl (BUN)	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.349	0.304	0.394	0.023	0.045	Uricase @ 293 nm
	mg/dl	5.86	5.10	6.62	0.380	0.760	
	mmol/l	0.349	0.304	0.394	0.023	0.045	Uricase perox. no ascorb. ox.
	mg/dl	5.86	5.10	6.62	0.380	0.760	

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Siemens Dimension RxL/Max/Xpand

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Glucose	mmol/l	6.37	5.41	7.33	0.480	0.960	Hexokinase
	mg/dl	115	97.8	132	8.50	17.0	
Urea	mmol/l	7.43	6.32	8.54	0.555	1.11	Urease, kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mg/dl (BUN)	20.8	17.7	23.9	1.55	3.10	

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Single Beam Instruments

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Copper	µmol/l	19.1	15.3	22.9	1.90	3.80	Atomic absorption
	µg/dl	121	96.8	145	12.0	24.0	

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Thermo Konelab 20/30/60/Indiko

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	37.6	32.0	43.2	2.80	5.60	Bromocresol Green
	g/dl	3.76	3.20	4.32	0.280	0.560	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P
Calcium	mmol/l	2.27	2.04	2.50	0.115	0.230	Arsenazo III
	mg/dl	9.10	8.19	10.0	0.450	0.900	
Cholesterol	mmol/l	4.09	3.56	4.62	0.265	0.530	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	137	179	10.5	21.0	
CK, Total	U/l	210	172	248	19.0	38.0	CK-NAC (IFCC)
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	6.37	5.41	7.33	0.480	0.960	Glucose oxidase
	mg/dl	115	97.8	132	8.50	17.0	
Magnesium	mmol/l	0.936	0.824	1.05	0.057	0.114	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.135	0.270	
Phosphate, Inorganic	mmol/l	1.75	1.49	2.01	0.130	0.260	Phosphomolybdate UV
	mg/dl	5.43	4.62	6.24	0.405	0.810	
Potassium	mmol/l	3.85	3.54	4.16	0.155	0.310	ISE method - direct
Protein, Total	g/l	56.1	44.9	67.3	5.60	11.2	Biuret reaction, end point
	g/dl	5.61	4.49	6.73	0.560	1.12	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.941	1.30	0.090	0.180	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.9	
Urea	mmol/l	7.62	6.48	8.76	0.570	1.14	Urease, kinetic
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	

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Trident Med Chloridemeter

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	318	254	382	32.0	64.0	Freezing point depression

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Wiener Lab CM 200/250

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

Lot. No: 1676UN Cat. No: HN1530 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Alkaline Phosphatase	U/l	261	222	300	19.5	39.0	Diethanolamine buffer, DEA
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P
Creatinine	mg/dl	1.51	1.21	1.81	0.150	0.300	Alkaline picrate no deproteinisation
	µmol/l	134	107	161	13.5	27.0	
LD (LDH)	U/l	424	360	488	32.0	64.0	P to L SFBC / SEQC
Urea	mmol/l	8.01	6.81	9.21	0.600	1.20	Urease, kinetic
	mg/dl	48.1	40.9	55.3	3.60	7.20	
	mg/dl (BUN)	22.4	19.0	25.8	1.70	3.40	

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ADDITIONAL VALUES FOR HUMAN ASSAYED MULTI-SERA – LEVEL 2 (HUM ASY CONTROL 2) Cat No. HN1530 / HS2611 Lot No. 1676UN GTIN: 05055273203783 / 05055273203813

Diatron Pictus 500/700

COMPONENT	UNITS	TARGET	RANGE	METHOD
Albumin	g/l	39.3	31.4 – 47.2	Bromocresol Green
	g/dl	3.93	3.14 – 4.72	
Alkaline Phosphatase	U/l	187	149 - 224	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43.0	34.0 – 51.0	Tris buffer without P5P 37°C
Amylase Total	U/l	81.0	65.0 – 97.0	Other 2-chloro-pNPG3 37°C
AST (GOT)	U/l	37.0	30.0 – 45.0	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	17.8	14.2 – 21.4	Diazo with Sulphanilic Acid
	mg/dl	1.04	0.830 – 1.25	
Bilirubin Total	µmol/l	29.1	23.3 – 34.9	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.70	1.36 – 2.04	
Calcium	mmol/l	2.10	1.67 – 2.52	Arsenazo III
	mg/dl	8.40	6.70 – 10.1	
Chloride	mmol/l	98.0	89.0 - 106	ISE Direct
Cholesterol	mmol/l	3.98	3.18 – 4.76	Cholesterol Oxidase
	mg/dl	154	123 - 184	
Cholinesterase	U/l	6040	4832 - 7248	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	203	163 - 244	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	111	89.3 - 133	Alkaline picrate no deproteinisation
	mg/dl	1.26	1.01 – 1.51	
	µmol/l	128	103 - 154	Enzymatic UV method (340nm)
	mg/dl	1.45	1.16 – 1.74	

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COMPONENT	UNITS	TARGET	RANGE	METHOD
gamma-GT	U/l	51.3	41.0 – 62.6	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.11	4.88 – 7.33	Hexokinase
	mg/dl	110	88.0 - 132	
	mmol/l	6.11	4.88 – 7.33	Glucose Oxidase
	mg/dl	110	88.0 - 132	
Iron	µmol/l	20.4	16.3 – 24.5	Colorimetric without ppt.
	µg/dl	114	91.0 - 137	
LD (LDH)	U/l	217	173 - 260	L->P IFCC 37°C
LD (LDH)	U/l	422	338 - 507	P->L SFBC 37°C
Magnesium	mmol/l	0.913	0.732 – 1.09	Xylidyl Blue
	mg/dl	2.22	1.78 – 2.66	
Phosphate Inorganic	mmol/l	1.72	1.38 – 2.07	Phosphomolybdate UV
	mg/dl	5.34	4.27 – 6.41	
Potassium	mmol/l	3.80	3.46 – 4.14	ISE Direct
Protein Total	g/l	56.6	45.3 – 67.9	Biuret reaction end point
	g/dl	5.66	4.53 – 6.79	
Sodium	mmol/l	144	135 - 153	ISE Direct
Triglycerides	mmol/l	1.06	0.848 – 1.28	Lipase/GPO-PAP no correction (Dual Reagent)
	mg/dl	94.0	75.0 - 113	
Triglycerides	mmol/l	1.05	0.836 – 1.25	Lipase/GPO-PAP no correction (Mono Reagent)
	mg/dl	93.0	74.0 - 111	
Urea	mmol/l	7.49	5.99 – 8.99	Urease kinetic
	mg/dl	45.0	36.0 – 54.0	
Uric Acid (Urate)	mmol/l	0.348	0.278 – 0.418	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	4.68 – 7.02	

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