PRODUCT INFORMATION

HE1532

Lot: 1340UE

Please note the concentration level of analyte Total and Prostatic Acid Phosphatase will be lower in Lot 1340UE compared to previous elevated controls.

Acid Phosphatase (Total) approximate concentration 3U/L previous controls 30U/L.

Acid Phosphatase (Prostatic) no targets and ranges provided.

For any queries regarding this, please contact technical.services@randox.com

qCCS 665

FORM NO. 8373-GP
REVISION (2)
2 Aug 2019

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

CAT. NO.	HE1532	**GTIN:**	05055273203608	**SIZE:**	20 x 5ml
CAT. NO.	HS2611	**GTIN:**	05055273203813	**SIZE:**	5 x 5ml
LOT NO.	1340UE	**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 3 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 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	28.6	24.3	32.9	2.15	4.30	Abbott Alinity Albumin BCG 2
	g/dl	2.86	2.43	3.29	0.215	0.430	
	g/l	26.6	22.6	30.6	2.00	4.00	Abbott Alinity Albumin BCP 2
	g/dl	2.66	2.26	3.06	0.200	0.400	
	g/l	28.9	24.6	33.2	2.15	4.30	Bromocresol Green
	g/dl	2.89	2.46	3.32	0.215	0.430	
Alkaline Phosphatase	U/l	381	324	438	28.5	57.0	Abbott Alinity Alkaline Phosphatase 2
	U/l	371	315	427	28.0	56.0	AMP non-optimised
	U/l	381	324	438	28.5	57.0	AMP optimised to IFCC
ALT (GPT)	U/l	125	100	150	12.5	25.0	Abbott Alinity ALT 2
	U/l	124	99	149	12.5	25.0	Tris buffer without P5P
Amylase, Pancreatic	U/l	244	207	281	18.5	37.0	Amyloclastic Methods
	U/l	245	208	282	18.5	37.0	Immunoinhibition, EPS substrate
Amylase, Total	U/l	300	255	345	22.5	45.0	Abbott Alinity Amylase 2
	U/l	295	251	339	22.0	44.0	Abbott Architect/Alinity cal factor 3431
AST (GOT)	U/l	150	120	180	15.0	30.0	Abbott Alinity AST 2
	U/l	149	119	179	15.0	30.0	Tris buffer without P5P
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
	mmol/l	14.9	11.8	18.0	1.55	3.10	PEP Carboxylase
Bile Acids	µmol/l	44.5	35.6	53.4	4.45	8.90	Enzymatic Colorimetric
Bilirubin, Direct	mg/dl	1.88	1.49	2.27	0.195	0.390	Diazo with Dichloroanaline
	µmol/l	32.1	25.4	38.8	3.35	6.70	
	mg/dl	1.88	1.49	2.27	0.195	0.390	Diazo with Sulphanilic Acid
	µmol/l	32.1	25.4	38.8	3.35	6.70	
Bilirubin, Total	mg/dl	5.00	3.95	6.05	0.525	1.05	Abbott Alin/Arch cal batch no > 97447/8/9
	µmol/l	85.5	67.5	104	9.25	18.5	
	mg/dl	5.32	4.20	6.44	0.560	1.12	Abbott Alinity Total Bilirubin 2
	µmol/l	90.9	71.8	110	9.55	19.1	
	mg/dl	5.29	4.18	6.40	0.555	1.11	Diazo with Dichloroaniline
	µmol/l	90.4	71.4	109	9.30	18.6	
	mg/dl	5.11	4.04	6.18	0.535	1.07	Diazo with Sulphanilic Acid
	µmol/l	87.3	69.0	106	9.35	18.7	
	mg/dl	5.24	4.14	6.34	0.550	1.10	Diazonium ion
	µmol/l	89.5	70.7	108	9.25	18.5	
Calcium	mmol/l	3.03	2.73	3.33	0.150	0.300	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.600	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.49	6.52	8.46	0.485	0.970	Abbott Alinity Cholesterol 2
	mg/dl	289	251	327	19.0	38.0	

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

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Abbott Alinity c

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Cholesterol	mmol/l	7.44	6.47	8.41	0.485	0.970	Cholesterol Oxidase - Abell Kendall
	mg/dl	287	250	324	18.5	37.0	
Cholinesterase	U/l	6296	5037	7555	630	1259	Colorimetric - Butyrylthiocholine
CK, Total	U/l	561	460	662	50.5	101	Abbott CK-NAC (IFCC)
	U/l	559	458	660	50.5	101	CK-NAC (IFCC)
Copper	µmol/l	25.0	20.0	30.0	2.50	5.00	Colorimetric
	µg/dl	159	127	191	16.0	32.0	
Creatinine	mg/dl	4.07	3.26	4.88	0.405	0.810	Abbott Alinity Creatinine 2
	µmol/l	360	288	432	36.0	72.0	
	mg/dl	4.06	3.25	4.87	0.405	0.810	Alkaline picrate no deproteinisation
	µmol/l	359	287	431	36.0	72.0	
	mg/dl	4.03	3.22	4.84	0.405	0.810	IDMS traceable
	µmol/l	357	286	428	35.5	71.0	
gamma-GT	U/l	186	158	214	14.0	28.0	Abbott Alinity GGT 2
	U/l	181	154	208	13.5	27.0	Gamma glut.-3-carb.-4-nitro.
	U/l	182	155	209	13.5	27.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.5	41.0	
HDL-Cholesterol	mmol/l	2.65	2.25	3.05	0.200	0.400	Direct HDL, Clearance method
	mg/dl	102	86.7	117	7.50	15.0	
	mmol/l	2.47	2.10	2.84	0.185	0.370	Direct HDL, PPD
	mg/dl	95.3	81.0	110	7.35	14.7	
	mmol/l	2.57	2.18	2.96	0.195	0.390	HDL Ultra/Accel Selective Detergent
	mg/dl	99.2	84.3	114	7.40	14.8	
Iron	µmol/l	40.5	33.2	47.8	3.65	7.30	Abbott Alinity Iron 2
	µg/dl	226	185	267	20.5	41.0	
	µmol/l	40.3	33.0	47.6	3.65	7.30	Colorimetric without ppt.
	µg/dl	225	185	265	20.0	40.0	
Lactate	mmol/l	5.79	4.75	6.83	0.520	1.04	Colorimetric - Lactate oxidase
	mg/dl	52.2	42.8	61.6	4.70	9.40	
LD (LDH)	U/l	375	319	431	28.0	56.0	Abbott Alinity LD 2
	U/l	379	322	436	28.5	57.0	L to P IFCC
	U/l	369	314	424	27.5	55.0	Lactate to Pyruvate methods
Lipase	U/l	61	49	73	6.00	12.0	Other Colorimetric
Lithium	mmol/l	2.07	1.82	2.32	0.125	0.250	Spectrophotometric
	mg/dl	1.44	1.27	1.61	0.085	0.170	
Magnesium	mmol/l	1.84	1.62	2.06	0.110	0.220	Arsenazo III
	mg/dl	4.47	3.93	5.01	0.270	0.540	

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Abbott Alinity c

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Magnesium	mmol/l	1.85	1.63	2.07	0.110	0.220	Enzymatic
	mg/dl	4.50	3.96	5.04	0.270	0.540	
Phosphate, Inorganic	mmol/l	2.18	1.85	2.51	0.165	0.330	Phosphomolybdate enzymatic
	mg/dl	6.76	5.75	7.77	0.505	1.01	
	mmol/l	2.18	1.85	2.51	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.76	5.75	7.77	0.505	1.01	
Potassium	mmol/l	6.01	5.53	6.49	0.240	0.480	ISE method - indirect
Protein, Total	g/l	46.5	37.2	55.8	4.65	9.30	Abbott Alinity Total Protein 2
	g/dl	4.65	3.72	5.58	0.465	0.930	
	g/l	46.3	37.0	55.6	4.65	9.30	Biuret reaction, end point
	g/dl	4.63	3.70	5.56	0.465	0.930	
Sodium	mmol/l	155	147	163	4.00	8.00	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	2.57	2.16	2.98	0.205	0.410	Abbott Alinity i
	mg/dl	227	191	263	18.0	36.0	
	mmol/l	2.61	2.19	3.03	0.210	0.420	Lipase/GPO-PAP no correction
	mg/dl	231	194	268	18.5	37.0	
Urea	mmol/l	20.6	17.5	23.7	1.55	3.10	Abbott Architect Urea Nitrogen 2
	mg/dl	124	105	143	9.50	19.0	
	mg/dl (BUN)	57.7	49.0	66.4	4.35	8.70	
	mmol/l	21.7	18.4	25.0	1.65	3.30	Urease, kinetic
	mg/dl	130	111	149	9.50	19.0	
	mg/dl (BUN)	60.8	51.7	69.9	4.55	9.10	
Uric Acid (Urate)	mmol/l	0.523	0.455	0.591	0.034	0.068	Abbott Alinity Uric Acid 2
	mg/dl	8.79	7.65	9.93	0.570	1.14	
	mmol/l	0.522	0.454	0.590	0.034	0.068	Uricase perox. no ascorb. ox.
	mg/dl	8.77	7.63	9.91	0.570	1.14	
	mmol/l	0.518	0.451	0.585	0.034	0.067	Uricase Perox. with ascorb. ox
	mg/dl	8.70	7.57	9.83	0.565	1.13	
	mmol/l	0.531	0.462	0.600	0.035	0.069	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	8.92	7.76	10.1	0.590	1.18	

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Abbott Alinity i

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
PSA, Total	ng/ml	15.1	11.3	18.9	1.90	3.80	Abbott Architect/ Alinity
Thyroid Stimulating Hormone (TSH)	µU/ml	0.908	0.726	1.09	0.091	0.182	Abbott Architect/ Alinity
Total T3	nmol/l	2.71	2.03	3.39	0.340	0.680	Abbott Architect/ Alinity
	ng/ml	1.76	1.32	2.20	0.220	0.440	
	ng/dl	176	132	220	22.0	44.0	

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Abbott Architect c systems

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	26.7	22.7	30.7	2.00	4.00	Abbott Alinity Albumin BCP 2
	g/dl	2.67	2.27	3.07	0.200	0.400	
	g/l	29.0	24.7	33.3	2.15	4.30	Abbott Architect Albumin BCG 2
	g/dl	2.90	2.47	3.33	0.215	0.430	
	g/l	28.3	24.1	32.5	2.10	4.20	Abbott Architect Albumin BCP 2
	g/dl	2.83	2.41	3.25	0.210	0.420	
	g/l	28.9	24.6	33.2	2.15	4.30	Bromocresol Green
	g/dl	2.89	2.46	3.32	0.215	0.430	
	g/l	28.6	24.3	32.9	2.15	4.30	Bromocresol Purple
	g/dl	2.86	2.43	3.29	0.215	0.430	
Alkaline Phosphatase	U/l	378	321	435	28.5	57.0	Abbott Architect Alkaline Phosphatase 2
	U/l	376	320	432	28.0	56.0	AMP non-optimised
	U/l	369	314	424	27.5	55.0	AMP optimised to IFCC
ALT (GPT)	U/l	125	100	150	12.5	25.0	Abbott Architect ALT 2
	U/l	128	102	154	13.0	26.0	Tris buffer without P5P
Amylase, Pancreatic	U/l	245	208	282	18.5	37.0	Immunoinhibition, EPS substrate
Amylase, Total	U/l	300	255	345	22.5	45.0	Abbott Architect Amylase 2
	U/l	296	252	340	22.0	44.0	Abbott Architect/Alinity cal factor 3431
AST (GOT)	U/l	147	118	176	14.5	29.0	Abbott Architect AST 2
	U/l	142	114	170	14.0	28.0	Tris buffer without P5P
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
	mmol/l	14.5	11.5	17.5	1.50	3.00	PEP Carboxylase
Bile Acids	µmol/l	45.7	36.6	54.8	4.55	9.10	Enzymatic Colorimetric
Bilirubin, Direct	mg/dl	1.91	1.51	2.31	0.200	0.400	Diazo with Dichloroanaline
	µmol/l	32.6	25.8	39.4	3.40	6.80	
	mg/dl	1.88	1.49	2.27	0.195	0.390	Diazo with Sulphanilic Acid
	µmol/l	32.2	25.4	39.0	3.40	6.80	
Bilirubin, Total	mg/dl	5.14	4.06	6.22	0.540	1.08	Abbott Alin/Arch cal batch no > 97447/8/9
	µmol/l	87.8	69.4	106	9.10	18.2	
	mg/dl	5.77	4.56	6.98	0.605	1.21	Abbott Architect Total Bilirubin 2
	µmol/l	98.7	78.0	119	10.2	20.3	
	mg/dl	5.44	4.30	6.58	0.570	1.14	Diazo with Dichloroaniline
	µmol/l	93.0	73.5	113	10.0	20.0	
	mg/dl	5.25	4.15	6.35	0.550	1.10	Diazo with Sulphanilic Acid
	µmol/l	89.7	70.9	109	9.65	19.3	
	mg/dl	5.37	4.24	6.50	0.565	1.13	Diazonium ion
	µmol/l	91.8	72.5	111	9.60	19.2	
Calcium	mmol/l	3.01	2.71	3.31	0.150	0.300	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.600	1.20	

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Abbott Architect c systems

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Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	111	102	120	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.54	6.56	8.52	0.490	0.980	Abbott Architect Cholesterol 2
	mg/dl	291	253	329	19.0	38.0	
	mmol/l	7.47	6.50	8.44	0.485	0.970	Cholesterol Oxidase - Abell Kendall
	mg/dl	288	251	325	18.5	37.0	
Cholinesterase	U/l	6412	5130	7694	641	1282	Colorimetric - Butyrylthiocholine
CK, Total	U/l	552	453	651	49.5	99.0	Abbott CK-NAC (IFCC)
	U/l	543	445	641	49.0	98.0	CK-NAC (IFCC)
Creatinine	mg/dl	4.08	3.26	4.90	0.410	0.820	Abbott Architect Creatinine 2
	µmol/l	361	289	433	36.0	72.0	
	mg/dl	4.09	3.27	4.91	0.410	0.820	Alkaline picrate no deproteinisation
	µmol/l	362	290	434	36.0	72.0	
gamma-GT	U/l	186	158	214	14.0	28.0	Abbott Architect GGT 2
	U/l	179	152	206	13.5	27.0	Gamma glut.-3-carb.-4-nitro.
	U/l	181	154	208	13.5	27.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	233	315	20.5	41.0	
HDL-Cholesterol	mmol/l	2.77	2.35	3.19	0.210	0.420	Direct HDL, PPD
	mg/dl	107	91.0	123	8.00	16.0	
	mmol/l	2.67	2.27	3.07	0.200	0.400	HDL Ultra/Accel Selective Detergent
	mg/dl	103	87.6	118	7.50	15.0	
Iron	µmol/l	41.5	34.0	49.0	3.75	7.50	Abbott Architect Chemilum
	µg/dl	232	190	274	21.0	42.0	
	µmol/l	41.1	33.7	48.5	3.70	7.40	Colorimetric without ppt.
	µg/dl	230	189	271	20.5	41.0	
Lactate	mmol/l	5.81	4.76	6.86	0.525	1.05	Colorimetric - Lactate oxidase
	mg/dl	52.3	42.9	61.7	4.70	9.40	
LD (LDH)	U/l	374	318	430	28.0	56.0	Abbott Architect LD 2
	U/l	376	320	432	28.0	56.0	L to P IFCC
	U/l	378	321	435	28.5	57.0	Lactate to Pyruvate methods
Lipase	U/l	57	46	68	5.50	11.0	Other Colorimetric
Lithium	mmol/l	2.14	1.88	2.40	0.130	0.260	Spectrophotometric
	mg/dl	1.49	1.31	1.67	0.090	0.180	
Magnesium	mmol/l	1.85	1.63	2.07	0.110	0.220	Arsenazo III
	mg/dl	4.50	3.96	5.04	0.270	0.540	
	mmol/l	1.85	1.63	2.07	0.110	0.220	Enzymatic
	mg/dl	4.50	3.96	5.04	0.270	0.540	
Osmolality	mOsm/kg	352	282	422	35.0	70.0	Calculated

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Abbott Architect c systems

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	2.21	1.88	2.54	0.165	0.330	Phosphomolybdate enzymatic
	mg/dl	6.85	5.82	7.88	0.515	1.03	
	mmol/l	2.20	1.87	2.53	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.510	1.02	
Potassium	mmol/l	6.02	5.54	6.50	0.240	0.480	ISE method - indirect
Protein, Total	g/l	47.4	37.9	56.9	4.75	9.50	Abbott Architect total Protein 2
	g/dl	4.74	3.79	5.69	0.475	0.950	
	g/l	47.2	37.8	56.6	4.70	9.40	Biuret reaction, end point
	g/dl	4.72	3.78	5.66	0.470	0.940	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
TIBC	µmol/l	41.9	33.1	50.7	4.40	8.80	Calculated from Transferrin
	µg/dl	234	185	283	24.5	49.0	
	µmol/l	45.5	35.9	55.1	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	254	201	307	26.5	53.0	
Triglycerides	mmol/l	2.61	2.19	3.03	0.210	0.420	Abbott Architect Triglyceride 2
	mg/dl	231	194	268	18.5	37.0	
	mmol/l	2.62	2.20	3.04	0.210	0.420	Lipase/GK UV. no correction
	mg/dl	232	195	269	18.5	37.0	
	mmol/l	2.61	2.19	3.03	0.210	0.420	Lipase/GPO-PAP no correction
	mg/dl	231	194	268	18.5	37.0	
Urea	mmol/l	22.3	19.0	25.6	1.65	3.30	Abbott Architect Urea Nitrogen 2
	mg/dl	134	114	154	10.0	20.0	
	mg/dl (BUN)	62.5	53.1	71.9	4.70	9.40	
	mmol/l	22.1	18.8	25.4	1.65	3.30	Urease, kinetic
	mg/dl	133	113	153	10.0	20.0	
	mg/dl (BUN)	61.9	52.6	71.2	4.65	9.30	
Uric Acid (Urate)	mmol/l	0.530	0.461	0.599	0.035	0.069	Abbott Architect Uric Acid 2
	mg/dl	8.90	7.74	10.1	0.600	1.20	
	mmol/l	0.527	0.458	0.596	0.035	0.069	Uricase perox. no ascorb. ox.
	mg/dl	8.85	7.70	10.0	0.575	1.15	
	mmol/l	0.527	0.458	0.596	0.035	0.069	Uricase Perox. with ascorb. ox
	mg/dl	8.85	7.70	10.0	0.575	1.15	

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Abbott Architect i Systems

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
PSA, Total	ng/ml	14.4	10.8	18.0	1.80	3.60	Abbott Architect/ Alinity
Thyroid Stimulating Hormone (TSH)	µU/ml	0.921	0.737	1.11	0.095	0.189	Abbott Architect/ Alinity
Total T3	nmol/l	2.58	1.94	3.22	0.320	0.640	Abbott Architect/ Alinity
	ng/ml	1.68	1.26	2.10	0.210	0.420	
	ng/dl	168	126	210	21.0	42.0	
Total T4	nmol/l	249	187	311	31.0	62.0	Abbott Architect/ Alinity
	ng/ml	194	146	242	24.0	48.0	
	µg/dl	19.4	14.6	24.2	2.40	4.80	

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Abbott Architect Systems(Archem Reagent)

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	126	101	151	12.5	25.0	Abbott Architect ALT 2
AST (GOT)	U/l	144	115	173	14.5	29.0	Abbott Architect AST 2
gamma-GT	U/l	182	155	209	13.5	27.0	Abbott Architect GGT 2

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Advanced Ins. Micro Osmometer 3300/3320

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	385	308	462	38.5	77.0	Freezing point depression

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Advanced Instruments Osmometer

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

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

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/kg	386	309	463	38.5	77.0	Freezing point depression

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Arkray OM-6050/ OM-6060

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	383	306	460	38.5	77.0	Freezing point depression

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Beckman Access Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	62.1	46.6	77.6	7.75	15.5	Beckman Access/LXi725
	pg/ml	48.4	36.3	60.5	6.05	12.1	
	ng/dl	4.84	3.63	6.05	0.605	1.21	
Thyroid Stimulating Hormone (TSH)	µU/ml	1.16	0.928	1.39	0.115	0.230	Beckman DXI600/800/ Access 2 (3rd IS)

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Beckman Coulter AU Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	29.0	24.7	33.3	2.15	4.30	Bromocresol Green
	g/dl	2.90	2.47	3.33	0.215	0.430	
Alkaline Phosphatase	U/l	410	349	471	30.5	61.0	AMP optimised to IFCC
	U/l	403	343	463	30.0	60.0	Beckman AMP (Calibrator)
	U/l	408	347	469	30.5	61.0	Beckman AMP (Extinction Coeff)
	U/l	528	449	607	39.5	79.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	133	106	160	13.5	27.0	Beckman (Extinction Coefficient)
	U/l	137	110	164	13.5	27.0	Beckman Mod. IFCC Ref. without P5P
	U/l	136	109	163	13.5	27.0	Tris buffer without P5P
Amylase, Total	U/l	261	222	300	19.5	39.0	Beckman CNPG3 (Extinction Coeff)
	U/l	281	239	323	21.0	42.0	Beckman CNPG3 (Master Cal)
	U/l	288	245	331	21.5	43.0	Beckman Coulter - blocked pNPG7
	U/l	285	242	328	21.5	43.0	Beckman maltotetraose
AST (GOT)	U/l	133	106	160	13.5	27.0	Beckman (Extinction Coefficient)
	U/l	137	110	164	13.5	27.0	Beckman Mod. IFCC Ref. without P5P
Bicarbonate	mmol/l	17.0	13.5	20.5	1.75	3.50	PEP Carboxylase
Bile Acids	µmol/l	44.7	35.8	53.6	4.45	8.90	Enzymatic Colorimetric
	µmol/l	45.6	36.5	54.7	4.55	9.10	Enzymatic Colorimetric - Sentinel
Bilirubin, Direct	mg/dl	1.50	1.19	1.81	0.155	0.310	Dichlorophenyl Diazonium
	µmol/l	25.6	20.2	31.0	2.70	5.40	
Bilirubin, Total	mg/dl	5.56	4.39	6.73	0.585	1.17	DPD (Beckman AU)
	µmol/l	95.0	75.1	115	10.0	20.0	
Calcium	mmol/l	3.08	2.77	3.39	0.155	0.310	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.600	1.20	
	mmol/l	3.07	2.76	3.38	0.155	0.310	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Chloride	mmol/l	109	100	118	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.55	6.57	8.53	0.490	0.980	Cholesterol Oxidase - Abell Kendall
	mg/dl	291	253	329	19.0	38.0	
	mmol/l	7.79	6.78	8.80	0.505	1.01	Cholesterol Oxidase - IDMS
	mg/dl	301	262	340	19.5	39.0	
CK, Total	U/l	557	457	657	50.0	100	Beckman CK-NAC (Extinction Coeff)
	U/l	575	472	678	51.5	103	Beckman CK-NAC (IFCC)
	U/l	572	469	675	51.5	103	CK-NAC (IFCC)
	U/l	540	443	637	48.5	97.0	CK-NAC substrate start (DGKC)
Copper	µmol/l	27.5	22.0	33.0	2.75	5.50	Colorimetric
	µg/dl	175	140	210	17.5	35.0	
Creatinine	mg/dl	3.83	3.06	4.60	0.385	0.770	Alkaline picrate no deproteinisation
	µmol/l	339	271	407	34.0	68.0	

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Beckman Coulter AU Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	mg/dl	4.01	3.21	4.81	0.400	0.800	IDMS traceable
	µmol/l	355	284	426	35.5	71.0	
	mg/dl	3.79	3.03	4.55	0.380	0.760	Jaffe rate blanked
	µmol/l	335	268	402	33.5	67.0	
	mg/dl	4.02	3.22	4.82	0.400	0.800	Jaffe rate comp. (-18umol/l)
	µmol/l	356	285	427	35.5	71.0	
D-3-Hydroxybutyrate	mmol/l	1.17	0.995	1.35	0.090	0.180	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	182	155	209	13.5	27.0	Beckman Szasz (Extinction Coeff.)
	U/l	179	152	206	13.5	27.0	Gamma glut.-3-carb.-4-nitro.
	U/l	181	154	208	13.5	27.0	Gamma glut`3-carb`4-nitro(IFCC)
GLDH	U/l	33	26	40	3.50	7.00	Triethanolamine buffer
Glucose	mmol/l	14.9	12.7	17.1	1.10	2.20	Glucose oxidase
	mg/dl	268	228	308	20.0	40.0	
	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.5	41.0	
HDL-Cholesterol	mmol/l	2.60	2.21	2.99	0.195	0.390	Direct HDL, Immunoseparation
	mg/dl	100	85.0	115	7.50	15.0	
	mmol/l	2.56	2.18	2.94	0.190	0.380	Direct HDL, PPD
	mg/dl	98.8	84.0	114	7.60	15.2	
	mmol/l	2.84	2.41	3.27	0.215	0.430	HDL Ultra/Accel Selective Detergent
	mg/dl	110	93.5	127	8.50	17.0	
Iron	µmol/l	39.4	32.3	46.5	3.55	7.10	Colorimetric with ppt.
	µg/dl	220	180	260	20.0	40.0	
	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric without ppt.
	µg/dl	217	178	256	19.5	39.0	
Lactate	mmol/l	5.46	4.48	6.44	0.490	0.980	Colorimetric - Lactate oxidase
	mg/dl	49.2	40.3	58.1	4.45	8.90	
LD (LDH)	U/l	355	302	408	26.5	53.0	L to P Beckman (Extinction Coeff)
	U/l	382	325	439	28.5	57.0	L to P IFCC
	U/l	388	330	446	29.0	58.0	Lactate to Pyruvate methods
	U/l	843	717	969	63.0	126	P to L Scandinavian & Dutch
	U/l	835	710	960	62.5	125	Pyruvate 1.4 mM - Beckman LD-P
Lipase	U/l	88	71	105	8.50	17.0	Colorimetric Randox
	U/l	61	49	73	6.00	12.0	Other Colorimetric
Lithium	mmol/l	2.17	1.91	2.43	0.130	0.260	Spectrophotometric
	mg/dl	1.51	1.33	1.69	0.090	0.180	
Magnesium	mmol/l	1.83	1.61	2.05	0.110	0.220	Xylidyl Blue
	mg/dl	4.45	3.92	4.98	0.265	0.530	

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Beckman Coulter AU Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	343	274	412	34.5	69.0	Calculated
Phosphate, Inorganic	mmol/l	2.25	1.91	2.59	0.170	0.340	Phosphomolybdate UV
	mg/dl	6.98	5.93	8.03	0.525	1.05	
Potassium	mmol/l	5.98	5.50	6.46	0.240	0.480	ISE method - indirect
Protein, Total	g/l	45.2	36.2	54.2	4.50	9.00	Biuret reaction, end point
	g/dl	4.52	3.62	5.42	0.450	0.900	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
TIBC	µmol/l	42.4	33.5	51.3	4.45	8.90	Direct Colorimetric
	µg/dl	237	187	287	25.0	50.0	
	µmol/l	43.2	34.1	52.3	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	241	190	292	25.5	51.0	
Triglycerides	mmol/l	2.70	2.27	3.13	0.215	0.430	Lipase/GK UV. no correction
	mg/dl	239	201	277	19.0	38.0	
	mmol/l	2.69	2.26	3.12	0.215	0.430	Lipase/GPO-PAP no correction
	mg/dl	238	200	276	19.0	38.0	
Urea	mmol/l	21.4	18.2	24.6	1.60	3.20	Urease, end point
	mg/dl	129	110	148	9.50	19.0	
	mg/dl (BUN)	59.9	50.9	68.9	4.50	9.00	
	mmol/l	21.8	18.5	25.1	1.65	3.30	Urease, kinetic
	mg/dl	131	111	151	10.0	20.0	
	mg/dl (BUN)	61.1	51.9	70.3	4.60	9.20	
Uric Acid (Urate)	mmol/l	0.547	0.476	0.618	0.036	0.071	Uricase perox. no ascorb. ox.
	mg/dl	9.19	8.00	10.4	0.605	1.21	
	mmol/l	0.544	0.473	0.615	0.036	0.071	Uricase Perox. with ascorb. ox
	mg/dl	9.14	7.95	10.3	0.580	1.16	

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Biomerieux Vidas/miniVidas/Vidas 3

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	84.4	63.3	106	10.8	21.6	bioMerieux, VIDAS-FT4N Kit
	pg/ml	65.8	49.4	82.2	8.20	16.4	
	ng/dl	6.58	4.94	8.22	0.820	1.64	
PSA, Total	ng/ml	17.6	13.2	22.0	2.20	4.40	bioMerieux VIDAS TPSA
Thyroid Stimulating Hormone (TSH)	µU/ml	1.17	0.936	1.40	0.115	0.230	bioMerieux VIDAS TSH
	µU/ml	1.32	1.06	1.58	0.130	0.260	Biomerieux VIDAS TSH3 Ultrasensitive
Total T3	nmol/l	3.21	2.41	4.01	0.400	0.800	bioMerieux, VIDAS
	ng/ml	2.09	1.57	2.61	0.260	0.520	
	ng/dl	209	157	261	26.0	52.0	

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HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	106	97.5	115	4.50	9.00	ISE, direct
Potassium	mmol/l	5.77	5.31	6.23	0.230	0.460	ISE method - direct
Sodium	mmol/l	150	143	157	3.50	7.00	ISE method - direct

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Dirui CS-Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	375	319	431	28.0	56.0	AMP optimised to IFCC
ALT (GPT)	U/l	142	114	170	14.0	28.0	Tris buffer without P5P
AST (GOT)	U/l	137	110	164	13.5	27.0	Tris buffer without P5P

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ELITech Selectra Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	31.9	27.1	36.7	2.40	4.80	Bromocresol Green
	g/dl	3.19	2.71	3.67	0.240	0.480	
ALT (GPT)	U/l	138	110	166	14.0	28.0	Tris buffer without P5P
AST (GOT)	U/l	139	111	167	14.0	28.0	Tris buffer without P5P
Bilirubin, Total	mg/dl	4.92	3.89	5.95	0.515	1.03	Diazo with Sulphanilic Acid
	µmol/l	84.1	66.4	102	8.95	17.9	
Calcium	mmol/l	3.06	2.75	3.37	0.155	0.310	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Glucose	mmol/l	14.5	12.3	16.7	1.10	2.20	Glucose oxidase
	mg/dl	261	222	300	19.5	39.0	
Triglycerides	mmol/l	2.63	2.21	3.05	0.210	0.420	Lipase/GPO-PAP no correction
	mg/dl	233	196	270	18.5	37.0	
Urea	mmol/l	20.7	17.6	23.8	1.55	3.10	Urease, kinetic
	mg/dl	124	105	143	9.50	19.0	
	mg/dl (BUN)	58.0	49.3	66.7	4.35	8.70	

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Hitachi Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	108	99.4	117	4.50	9.00	ISE, indirect
Potassium	mmol/l	6.10	5.61	6.59	0.245	0.490	ISE method - indirect
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect

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Medica Easylyte instruments

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	112	103	121	4.50	9.00	ISE, direct
Potassium	mmol/l	5.80	5.34	6.26	0.230	0.460	ISE method - direct
Sodium	mmol/l	151	143	159	4.00	8.00	ISE method - direct

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Method

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	3	2	4	0.500	1.00	Naphthyl phos. sub., kinetic
Albumin	g/l	30.6	26.0	35.2	2.30	4.60	Bromocresol Green
	g/dl	3.06	2.60	3.52	0.230	0.460	
	g/l	27.6	23.5	31.7	2.05	4.10	Bromocresol Purple
	g/dl	2.76	2.35	3.17	0.205	0.410	
	g/l	30.1	25.6	34.6	2.25	4.50	Ortho Vitros MicroSlide Systems
	g/dl	3.01	2.56	3.46	0.225	0.450	
	g/l	27.0	23.0	31.0	2.00	4.00	Turbidimetric Assays
	g/dl	2.70	2.30	3.10	0.200	0.400	
Alkaline Phosphatase	U/l	374	318	430	28.0	56.0	AMP non-optimised
	U/l	374	318	430	28.0	56.0	AMP optimised to IFCC
	U/l	344	292	396	26.0	52.0	Colorimetric
	U/l	510	434	586	38.0	76.0	Diethanolamine buffer, DEA
	U/l	304	258	350	23.0	46.0	Ortho Vitros MicroSlide Systems
ALT (GPT)	U/l	131	105	157	13.0	26.0	Colorimetric
	U/l	153	122	184	15.5	31.0	Ortho Vitros MicroSlide Systems
	U/l	150	120	180	15.0	30.0	Ortho Vitros MicroSlide visible
	U/l	136	109	163	13.5	27.0	Tris buffer with P5P
	U/l	130	104	156	13.0	26.0	Tris buffer without P5P
Amylase, Pancreatic	U/l	245	208	282	18.5	37.0	Immunoinhibition, EPS substrate
	U/l	246	209	283	18.5	37.0	Roche liquid stable pNPG7
Amylase, Total	U/l	300	255	345	22.5	45.0	Abbott Alinity Amylase 2
	U/l	300	255	345	22.5	45.0	Abbott Architect Amylase 2
	U/l	297	252	342	22.5	45.0	Abbott Architect/Alinity cal factor 3431
	U/l	281	239	323	21.0	42.0	Beckman CNPG3 (Master Cal)
	U/l	288	245	331	21.5	43.0	Beckman Coulter - blocked pNPG7
	U/l	275	234	316	20.5	41.0	BM/Roche Colorimetric pNPG7
	U/l	170	145	195	12.5	25.0	Ortho Vitros MicroSlide Systems
	U/l	273	232	314	20.5	41.0	Roche Integra 2-chloro-pNPG7
	U/l	272	231	313	20.5	41.0	Roche liquid stable pNPG7
	U/l	305	259	351	23.0	46.0	Siemens - blocked pNPG7
	U/l	319	271	367	24.0	48.0	Siemens 2-chloro-pNPG3
Apolipoprotein A1	g/l	0.941	0.772	1.11	0.085	0.169	Immunoturbidimetric
	mg/dl	94.1	77.2	111	8.45	16.9	
Apolipoprotein B	g/l	0.634	0.520	0.748	0.057	0.114	Immunoturbidimetric
	mg/dl	63.4	52.0	74.8	5.70	11.4	
AST (GOT)	U/l	169	135	203	17.0	34.0	Ortho Vitros MicroSlide visible
	U/l	155	124	186	15.5	31.0	Tris buffer with P5P
	U/l	132	106	158	13.0	26.0	Tris buffer without P5P

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Method

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

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

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
	mmol/l	15.5	12.3	18.7	1.60	3.20	PEP Carboxylase
Bile Acids	µmol/l	46.0	36.8	55.2	4.60	9.20	4th Generation Colorimetric
	µmol/l	44.5	35.6	53.4	4.45	8.90	5th Generation Colorimetric
Bilirubin, Direct	mg/dl	1.90	1.50	2.30	0.200	0.400	Diazo with Dichloroanaline
	µmol/l	32.5	25.7	39.3	3.40	6.80	
	mg/dl	1.94	1.53	2.35	0.205	0.410	Diazo with Sulphanilic Acid
	µmol/l	33.1	26.1	40.1	3.50	7.00	
	mg/dl	1.32	1.04	1.60	0.140	0.280	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	22.5	17.8	27.2	2.35	4.70	
	mg/dl	2.18	1.72	2.64	0.230	0.460	Modified Jendrassik
	µmol/l	37.3	29.5	45.1	3.90	7.80	
Bilirubin, Total	mg/dl	5.32	4.20	6.44	0.560	1.12	Diazo with Dichloroaniline
	µmol/l	90.9	71.8	110	9.55	19.1	
	mg/dl	5.18	4.09	6.27	0.545	1.09	Diazo with Sulphanilic Acid
	µmol/l	88.5	69.9	107	9.25	18.5	
	mg/dl	5.07	4.01	6.13	0.530	1.06	Diazonium ion
	µmol/l	86.7	68.5	105	9.15	18.3	
	mg/dl	4.89	3.86	5.92	0.515	1.03	Dichlorophenyl Diazonium
	µmol/l	83.6	66.0	101	8.70	17.4	
	mg/dl	5.56	4.39	6.73	0.585	1.17	DPD (Beckman AU)
	µmol/l	95.0	75.1	115	10.0	20.0	
	mg/dl	5.66	4.47	6.85	0.595	1.19	Modified Jendrassik
	µmol/l	96.8	76.5	117	10.1	20.2	
	mg/dl	5.45	4.31	6.59	0.570	1.14	Ortho Vitros MicroSlide Total Bil
	µmol/l	93.1	73.5	113	9.95	19.9	
	mg/dl	6.08	4.80	7.36	0.640	1.28	Oxidation to Biliverdin/Vanadate
	µmol/l	104	82.2	126	11.0	22.0	
Bilirubin, Unconjugated Vitros BU	mg/dl	4.84	3.82	5.86	0.510	1.02	BuBc Vitros slide
	µmol/l	82.8	65.4	100	8.60	17.2	
Calcium	mmol/l	3.04	2.74	3.34	0.150	0.300	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.600	1.20	
	mmol/l	3.08	2.77	3.39	0.155	0.310	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.600	1.20	
	mmol/l	3.08	2.77	3.39	0.155	0.310	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.600	1.20	
	mmol/l	3.08	2.77	3.39	0.155	0.310	Ortho Vitros MicroSlide Systems
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE, direct

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Method	HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)						
Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28							
Size: 20 x 5ml / 5 x 5ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	109	100	118	4.50	9.00	ISE, indirect
	mmol/l	113	104	122	4.50	9.00	Ortho Vitros MicroSlide Systems
Cholesterol	mmol/l	7.54	6.56	8.52	0.490	0.980	Abbott Architect Cholesterol 2
	mg/dl	291	253	329	19.0	38.0	
	mmol/l	7.51	6.53	8.49	0.490	0.980	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	252	328	19.0	38.0	
	mmol/l	7.51	6.53	8.49	0.490	0.980	Cholesterol Oxidase - IDMS
	mg/dl	290	252	328	19.0	38.0	
	mmol/l	7.45	6.48	8.42	0.485	0.970	Ortho Vitros MicroSlide Systems
	mg/dl	288	251	325	18.5	37.0	
Cholinesterase	U/l	5812	4650	6974	581	1162	Colorimetric - Butyrylthiocholine
CK, Total	U/l	525	431	619	47.0	94.0	CK-NAC (IFCC)
	U/l	530	435	625	47.5	95.0	CK-NAC substrate start (DGKC)
	U/l	517	424	610	46.5	93.0	Creatine phosphate substrate start
	U/l	439	360	518	39.5	79.0	Ortho Vitros MicroSlide Systems
Copper	µmol/l	27.5	22.0	33.0	2.75	5.50	Colorimetric
	µg/dl	175	140	210	17.5	35.0	
Cortisol	nmol/l	959	719	1199	120	240	Roche Cobas e402/e801
	µg/dl	34.5	25.9	43.1	4.30	8.60	
Creatinine	mg/dl	4.08	3.26	4.90	0.410	0.820	Abbott Architect Creatinine 2
	µmol/l	361	289	433	36.0	72.0	
	mg/dl	3.96	3.17	4.75	0.395	0.790	Alkaline picrate no deproteinisation
	µmol/l	350	280	420	35.0	70.0	
	mg/dl	4.01	3.21	4.81	0.400	0.800	IDMS traceable
	µmol/l	355	284	426	35.5	71.0	
	mg/dl	3.94	3.15	4.73	0.395	0.790	Jaffe rate blanked
	µmol/l	349	279	419	35.0	70.0	
	mg/dl	4.01	3.21	4.81	0.400	0.800	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	355	284	426	35.5	71.0	
	mg/dl	3.96	3.17	4.75	0.395	0.790	Jaffe rate comp. (-18umol/l)
	µmol/l	350	280	420	35.0	70.0	
	mg/dl	4.16	3.33	4.99	0.415	0.830	Vitros, IDMS traceable
	µmol/l	368	294	442	37.0	74.0	
D-3-Hydroxybutyrate	mmol/l	1.16	0.986	1.33	0.085	0.170	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.59	2.87	4.31	0.360	0.720	Immunoturbidimetric
	ng/ml	2.80	2.24	3.36	0.280	0.560	
Folate	nmol/l	6.41	4.87	7.95	0.770	1.54	Roche Cobas e402/e801
	ng/ml	2.83	2.15	3.51	0.340	0.680	

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Method	HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)						
Lot. No: 1340UE Cat. No: HE1532 / 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	93.6	70.2	117	11.7	23.4	Roche Cobas 4000/e411
	pg/ml	73.0	54.8	91.2	9.10	18.2	
	ng/dl	7.30	5.48	9.12	0.910	1.82	
	pmol/l	94.5	70.9	118	11.8	23.5	Roche Cobas e402/e801
	pg/ml	73.7	55.3	92.1	9.20	18.4	
	ng/dl	7.37	5.53	9.21	0.920	1.84	
gamma-GT	U/l	170	145	195	12.5	25.0	Gamma glut.-3-carb.-4-nitro.
	U/l	183	156	210	13.5	27.0	Gamma glut`3-carb`4-nitro(IFCC)
	U/l	201	171	231	15.0	30.0	Ortho Vitros MicroSlide Systems
Gentamicin	µmol/l	19.0	15.2	22.8	1.90	3.80	Gravimetric
	µg/ml	9.08	7.26	10.9	0.910	1.82	
GLDH	U/l	32	25	39	3.50	7.00	Triethanolamine buffer
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	233	315	20.5	41.0	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	233	315	20.5	41.0	
	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros MicroSlide Systems
	mg/dl	259	220	298	19.5	39.0	
HDL-Cholesterol	mmol/l	2.60	2.21	2.99	0.195	0.390	Direct HDL, Immunoseparation
	mg/dl	100	85.0	115	7.50	15.0	
	mmol/l	3.07	2.61	3.53	0.230	0.460	Direct HDL, PEGME
	mg/dl	119	101	137	9.00	18.0	
	mmol/l	2.67	2.27	3.07	0.200	0.400	Direct HDL, PPD
	mg/dl	103	87.6	118	7.50	15.0	
	mmol/l	3.19	2.71	3.67	0.240	0.480	Direct HDL, Roche 4th gen.
	mg/dl	123	105	141	9.00	18.0	
	mmol/l	2.64	2.24	3.04	0.200	0.400	HDL Ultra/Accel Selective Detergent
	mg/dl	102	86.7	117	7.50	15.0	
	mmol/l	2.58	2.19	2.97	0.195	0.390	Vitros dHDL, PTA/MgCl2 direct precip.
	mg/dl	99.6	84.7	115	7.70	15.4	
IgA	g/l	1.82	1.37	2.27	0.225	0.450	Turbidimetric (IFCC Cal.)
	mg/dl	182	137	227	22.5	45.0	
IgG	g/l	6.42	5.26	7.58	0.580	1.16	Turbidimetric (IFCC Cal.)
	mg/dl	642	526	758	58.0	116	
IgM	g/l	0.861	0.689	1.03	0.085	0.169	Turbidimetric (IFCC Cal.)
	mg/dl	86.1	68.9	103	8.45	16.9	
Iron	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric with ppt.
	µg/dl	217	178	256	19.5	39.0	

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Method

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Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Iron	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric without ppt.
	µg/dl	217	178	256	19.5	39.0	
	µmol/l	37.6	30.8	44.4	3.40	6.80	Ortho Vitros MicroSlide Systems
	µg/dl	210	172	248	19.0	38.0	
Lactate	mmol/l	5.64	4.62	6.66	0.510	1.02	Colorimetric - Lactate oxidase
	mg/dl	50.8	41.7	59.9	4.55	9.10	
	mmol/l	5.58	4.58	6.58	0.500	1.00	Enzymatic Electrode
	mg/dl	50.3	41.2	59.4	4.55	9.10	
	mmol/l	6.30	5.17	7.43	0.565	1.13	Ion Selective Electrode
	mg/dl	56.8	46.6	67.0	5.10	10.2	
LD (LDH)	U/l	392	333	451	29.5	59.0	L to P IFCC
	U/l	382	325	439	28.5	57.0	Lactate to Pyruvate methods
	U/l	428	364	492	32.0	64.0	Ortho Vitros IFCC Traceable
	U/l	765	650	880	57.5	115	P to L German methods
	U/l	844	717	971	63.5	127	P to L Scandinavian & Dutch
	U/l	761	647	875	57.0	114	P to L SFBC / SEQC
Lipase	U/l	68	55	81	6.50	13.0	Colorimetric Roche ACN(8)789/ID 0-052
	U/l	621	498	744	61.5	123	Ortho Vitros MicroSlide Systems
	U/l	62	50	74	6.00	12.0	Other Colorimetric
Lithium	mmol/l	2.21	1.94	2.48	0.135	0.270	ISE method - indirect
	mg/dl	1.53	1.35	1.71	0.090	0.180	
	mmol/l	2.15	1.89	2.41	0.130	0.260	Spectrophotometric
	mg/dl	1.49	1.31	1.67	0.090	0.180	
Magnesium	mmol/l	1.85	1.63	2.07	0.110	0.220	Arsenazo III
	mg/dl	4.50	3.96	5.04	0.270	0.540	
	mmol/l	1.83	1.61	2.05	0.110	0.220	Chlorphosphonazo III
	mg/dl	4.45	3.92	4.98	0.265	0.530	
	mmol/l	1.85	1.63	2.07	0.110	0.220	Enzymatic
	mg/dl	4.50	3.96	5.04	0.270	0.540	
	mmol/l	1.84	1.62	2.06	0.110	0.220	Methylthymol blue
	mg/dl	4.47	3.93	5.01	0.270	0.540	
	mmol/l	1.91	1.68	2.14	0.115	0.230	Ortho Vitros MicroSlide Systems
	mg/dl	4.64	4.08	5.20	0.280	0.560	
	mmol/l	1.82	1.60	2.04	0.110	0.220	Xylidyl Blue
	mg/dl	4.42	3.89	4.95	0.265	0.530	
NEFA	mmol/l	0.433	0.346	0.520	0.044	0.087	Colorimetric
Osmolality	mOsm/kg	350	280	420	35.0	70.0	Calculated

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Method	HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)						
Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28							
Size: 20 x 5ml / 5 x 5ml			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	385	308	462	38.5	77.0	Freezing point depression
Paracetamol (Acetamin.)	mmol/l	0.600	0.480	0.720	0.060	0.120	Gravimetric
	mg/l	90.8	72.6	109	9.10	18.2	
Phosphate, Inorganic	mmol/l	2.25	1.91	2.59	0.170	0.340	Ortho Vitros MicroSlide Systems
	mg/dl	6.98	5.93	8.03	0.525	1.05	
	mmol/l	2.22	1.89	2.55	0.165	0.330	Phosphomolybdate enzymatic
	mg/dl	6.88	5.85	7.91	0.515	1.03	
	mmol/l	2.23	1.90	2.56	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.91	5.87	7.95	0.520	1.04	
Potassium	mmol/l	5.99	5.51	6.47	0.240	0.480	Enzymatic
	mmol/l	5.95	5.47	6.43	0.240	0.480	ISE method - direct
	mmol/l	6.05	5.57	6.53	0.240	0.480	ISE method - indirect
	mmol/l	5.97	5.49	6.45	0.240	0.480	Ortho Vitros MicroSlide Systems
Protein, Total	g/l	45.2	36.2	54.2	4.50	9.00	Biuret reaction, end point
	g/dl	4.52	3.62	5.42	0.450	0.900	
	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction, kinetic
	g/dl	4.50	3.60	5.40	0.450	0.900	
	g/l	48.0	38.4	57.6	4.80	9.60	Ortho Vitros MicroSlide Systems
	g/dl	4.80	3.84	5.76	0.480	0.960	
PSA, Total	ng/ml	14.9	11.2	18.6	1.85	3.70	Abbott Architect/ Alinity
	ng/ml	19.3	14.5	24.1	2.40	4.80	Roche Cobas 4000/e411
	ng/ml	18.2	13.7	22.7	2.25	4.50	Roche Cobas e402/e801
	ng/ml	18.8	14.1	23.5	2.35	4.70	Roche Cobas e601/602
Salicylate	mmol/l	0.870	0.696	1.04	0.085	0.170	Gravimetric
	mg/dl	12.0	9.60	14.4	1.20	2.40	
Sodium	mmol/l	149	142	156	3.50	7.00	Enzymatic
	mmol/l	153	145	161	4.00	8.00	ISE method - direct
	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
	mmol/l	153	145	161	4.00	8.00	Ortho Vitros MicroSlide Systems
Theophylline	µmol/l	139	111	167	14.0	28.0	Gravimetric
	µg/ml	25.0	20.0	30.0	2.50	5.00	
Thyroid Stimulating Hormone (TSH)	µU/ml	0.899	0.719	1.08	0.091	0.181	Abbott Architect/ Alinity
	µU/ml	1.44	1.15	1.73	0.145	0.290	Roche Cobas 4000/e411
	µU/ml	1.35	1.08	1.62	0.135	0.270	Roche Cobas e402/e801
	µU/ml	1.36	1.09	1.63	0.135	0.270	Roche Cobas e601/ 602
TIBC	µmol/l	43.0	34.0	52.0	4.50	9.00	Calculated from Transferrin
	µg/dl	240	190	290	25.0	50.0	

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Method	HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
TIBC	µmol/l	45.9	36.3	55.5	4.80	9.60	Direct Colorimetric
	µg/dl	257	203	311	27.0	54.0	
	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	
Tobramycin	µmol/l	15.6	12.5	18.7	1.55	3.10	Gravimetric
	µg/ml	7.30	5.84	8.76	0.730	1.46	
Total T3	nmol/l	2.63	1.97	3.29	0.330	0.660	Abbott Architect/ Alinity
	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	253	190	316	31.5	63.0	Abbott Architect/ Alinity
	ng/ml	197	148	246	24.5	49.0	
	µg/dl	19.7	14.8	24.6	2.45	4.90	
Transferrin	g/l	1.72	1.38	2.06	0.170	0.340	Turbidimetric (IFCC Cal.)
	mg/dl	172	138	206	17.0	34.0	
Triglycerides	mmol/l	2.71	2.28	3.14	0.215	0.430	Lipase/GK UV. no correction
	mg/dl	240	202	278	19.0	38.0	
	mmol/l	2.71	2.28	3.14	0.215	0.430	Lipase/Glycerol Dehydrogenase
	mg/dl	240	202	278	19.0	38.0	
	mmol/l	2.72	2.28	3.16	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	241	202	280	19.5	39.0	
	mmol/l	2.71	2.28	3.14	0.215	0.430	Lipase/GPO-PAP, 0.11mmol/l correction
	mg/dl	240	202	278	19.0	38.0	
	mmol/l	3.18	2.67	3.69	0.255	0.510	Ortho Vitros MicroSlide Systems
	mg/dl	281	236	326	22.5	45.0	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Ortho Vitros MicroSlide Systems
	mg/dl	119	101	137	9.00	18.0	
	mg/dl (BUN)	55.5	47.2	63.8	4.15	8.30	
	mmol/l	21.6	18.4	24.8	1.60	3.20	Urease, end point
	mg/dl	130	111	149	9.50	19.0	
	mg/dl (BUN)	60.5	51.4	69.6	4.55	9.10	
	mmol/l	21.5	18.3	24.7	1.60	3.20	Urease, kinetic
	mg/dl	129	110	148	9.50	19.0	
	mg/dl (BUN)	60.2	51.2	69.2	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.511	0.445	0.577	0.033	0.066	Ortho Vitros MicroSlide Systems
	mg/dl	8.58	7.46	9.70	0.560	1.12	

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Method

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	0.536	0.466	0.606	0.035	0.070	Uricase @ 293 nm
	mg/dl	9.00	7.83	10.2	0.600	1.20	
	mmol/l	0.532	0.463	0.601	0.035	0.069	Uricase perox. no ascorb. ox.
	mg/dl	8.94	7.78	10.1	0.580	1.16	
	mmol/l	0.530	0.461	0.599	0.035	0.069	Uricase Perox. with ascorb. ox
	mg/dl	8.90	7.74	10.1	0.600	1.20	
	mmol/l	0.524	0.456	0.592	0.034	0.068	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	8.80	7.66	9.94	0.570	1.14	
Vitamin B12	pmol/l	254	203	305	25.5	51.0	Roche Cobas e402/e801
	pg/ml	344	275	413	34.5	69.0	

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Mindray BS Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

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

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/l	30.0	25.5	34.5	2.25	4.50	Bromocresol Green
	g/dl	3.00	2.55	3.45	0.225	0.450	
Alkaline Phosphatase	U/l	381	324	438	28.5	57.0	AMP optimised to IFCC
ALT (GPT)	U/l	144	115	173	14.5	29.0	Tris buffer without P5P
Amylase, Total	U/l	305	259	351	23.0	46.0	pNP Maltotrioside substrates
AST (GOT)	U/l	136	109	163	13.5	27.0	Tris buffer without P5P
Bilirubin, Direct	mg/dl	1.94	1.53	2.35	0.205	0.410	Diazo with Sulphanilic Acid
	µmol/l	33.1	26.1	40.1	3.50	7.00	
	mg/dl	1.64	1.30	1.98	0.170	0.340	Dichlorophenyl Diazonium
	µmol/l	28.1	22.2	34.0	2.95	5.90	
Bilirubin, Total	mg/dl	5.49	4.34	6.64	0.575	1.15	Diazo with Sulphanilic Acid
	µmol/l	93.8	74.1	114	10.1	20.2	
	mg/dl	5.44	4.30	6.58	0.570	1.14	Dichlorophenyl Diazonium
	µmol/l	93.0	73.5	113	10.0	20.0	
Calcium	mmol/l	3.16	2.84	3.48	0.160	0.320	Arsenazo III
	mg/dl	12.7	11.4	14.0	0.650	1.30	
Cholesterol	mmol/l	7.47	6.50	8.44	0.485	0.970	Cholesterol Oxidase - Abell Kendall
	mg/dl	288	251	325	18.5	37.0	
CK, Total	U/l	559	458	660	50.5	101	CK-NAC (IFCC)
Creatinine	mg/dl	3.88	3.10	4.66	0.390	0.780	Alkaline picrate no deproteinisation
	µmol/l	343	274	412	34.5	69.0	
gamma-GT	U/l	178	151	205	13.5	27.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.0	42.0	
HDL-Cholesterol	mmol/l	2.32	1.97	2.67	0.175	0.350	Direct HDL, Clearance method
	mg/dl	89.6	76.2	103	6.70	13.4	
Iron	µmol/l	36.4	29.8	43.0	3.30	6.60	Colorimetric without ppt.
	µg/dl	203	166	240	18.5	37.0	
LD (LDH)	U/l	378	321	435	28.5	57.0	L to P IFCC
	U/l	782	665	899	58.5	117	P to L German methods
	U/l	766	651	881	57.5	115	P to L SFBC / SEQC
Magnesium	mmol/l	1.78	1.57	1.99	0.105	0.210	Xylidyl Blue
	mg/dl	4.33	3.81	4.85	0.260	0.520	
Phosphate, Inorganic	mmol/l	2.18	1.85	2.51	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.76	5.75	7.77	0.505	1.01	
Protein, Total	g/l	47.3	37.8	56.8	4.75	9.50	Biuret reaction, end point
	g/dl	4.73	3.78	5.68	0.475	0.950	

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Mindray BS Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

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

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Triglycerides	mmol/l	2.68	2.25	3.11	0.215	0.430	Lipase/GPO-PAP no correction
	mg/dl	237	199	275	19.0	38.0	
Urea	mmol/l	21.6	18.4	24.8	1.60	3.20	Urease, kinetic
	mg/dl	130	111	149	9.50	19.0	
	mg/dl (BUN)	60.5	51.4	69.6	4.55	9.10	
Uric Acid (Urate)	mmol/l	0.533	0.464	0.602	0.035	0.069	Uricase perox. no ascorb. ox.
	mg/dl	8.95	7.79	10.1	0.575	1.15	
	mmol/l	0.524	0.456	0.592	0.034	0.068	Uricase Perox. with ascorb. ox
	mg/dl	8.80	7.66	9.94	0.570	1.14	
	mmol/l	0.531	0.462	0.600	0.035	0.069	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	8.92	7.76	10.1	0.590	1.18	

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Ortho Vitros 46/56/XT7600 Microtip/ well

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
TIBC	µmol/l	35.3	27.9	42.7	3.70	7.40	Ortho Vitros Microtip
	µg/dl	197	156	238	20.5	41.0	

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Osmometer - Freezing Point Dep.

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Osmolality	mOsm/kg	384	307	461	38.5	77.0	Freezing point depression

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Radiometer ABL 90 FLEX/ FLEX PLUS

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Glucose	mmol/l	14.5	12.3	16.7	1.10	2.20	Glucose oxidase
	mg/dl	261	222	300	19.5	39.0	
Lactate	mmol/l	5.55	4.55	6.55	0.500	1.00	Enzymatic Electrode
	mg/dl	50.0	41.0	59.0	4.50	9.00	

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Randox RX Series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	30.2	25.7	34.7	2.25	4.50	Bromocresol Green
	g/dl	3.02	2.57	3.47	0.225	0.450	
Alkaline Phosphatase	U/l	409	348	470	30.5	61.0	AMP optimised to IFCC
	U/l	609	518	700	45.5	91.0	Diethanolamine buffer, DEA
ALT (GPT)	U/l	145	116	174	14.5	29.0	Tris buffer without P5P
Amylase, Pancreatic	U/l	278	236	320	21.0	42.0	Randox liquid stable pNPG7
Amylase, Total	U/l	307	261	353	23.0	46.0	Randox Liquid Ethylidene pNPG7
AST (GOT)	U/l	144	115	173	14.5	29.0	Tris buffer without P5P
Bicarbonate	mmol/l	17.6	14.0	21.2	1.80	3.60	Enzymatic
Bile Acids	µmol/l	46.0	36.8	55.2	4.60	9.20	5th Generation Colorimetric
Bilirubin, Direct	mg/dl	2.12	1.67	2.57	0.225	0.450	Diazo with Sulphanilic Acid
	µmol/l	36.2	28.6	43.8	3.80	7.60	
	mg/dl	2.02	1.60	2.44	0.210	0.420	Oxidation to Biliverdin/Vanadate
	µmol/l	34.5	27.3	41.7	3.60	7.20	
Bilirubin, Total	mg/dl	5.56	4.39	6.73	0.585	1.17	Diazo with Sulphanilic Acid
	µmol/l	95.0	75.1	115	10.0	20.0	
	mg/dl	5.91	4.67	7.15	0.620	1.24	Oxidation to Biliverdin/Vanadate
	µmol/l	101	79.8	122	10.5	21.0	
Calcium	mmol/l	3.07	2.76	3.38	0.155	0.310	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Chloride	mmol/l	107	98.4	116	4.50	9.00	ISE, direct
Cholesterol	mmol/l	8.05	7.00	9.10	0.525	1.05	Cholesterol Oxidase - Abell Kendall
	mg/dl	311	271	351	20.0	40.0	
CK, Total	U/l	546	448	644	49.0	98.0	CK-NAC (IFCC)
	U/l	539	442	636	48.5	97.0	CK-NAC substrate start (DGKC)
Creatinine	mg/dl	3.40	2.72	4.08	0.340	0.680	Alkaline picrate no deproteinisation
	µmol/l	301	241	361	30.0	60.0	
	mg/dl	4.20	3.36	5.04	0.420	0.840	Enzymatic UV method
	µmol/l	372	298	446	37.0	74.0	
gamma-GT	U/l	193	164	222	14.5	29.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.0	42.0	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	237	321	21.0	42.0	
Iron	µmol/l	40.7	33.4	48.0	3.65	7.30	Colorimetric without ppt.
	µg/dl	228	187	269	20.5	41.0	
Lactate	mmol/l	5.72	4.69	6.75	0.515	1.03	Colorimetric - Lactate oxidase
	mg/dl	51.5	42.2	60.8	4.65	9.30	
LD (LDH)	U/l	375	319	431	28.0	56.0	L to P IFCC

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HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	773	657	889	58.0	116	P to L German methods
Lipase	U/l	86	69	103	8.50	17.0	Colorimetric Randox
Magnesium	mmol/l	1.76	1.55	1.97	0.105	0.210	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.255	0.510	
Phosphate, Inorganic	mmol/l	2.20	1.87	2.53	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.510	1.02	
Potassium	mmol/l	5.99	5.51	6.47	0.240	0.480	Enzymatic
	mmol/l	5.92	5.45	6.39	0.235	0.470	ISE method - direct
Protein, Total	g/l	46.8	37.4	56.2	4.70	9.40	Biuret reaction, end point
	g/dl	4.68	3.74	5.62	0.470	0.940	
Sodium	mmol/l	149	142	156	3.50	7.00	Enzymatic
	mmol/l	148	141	155	3.50	7.00	ISE method - direct
TIBC	µmol/l	47.6	37.6	57.6	5.00	10.0	Direct Colorimetric
	µg/dl	266	210	322	28.0	56.0	
Triglycerides	mmol/l	2.75	2.31	3.19	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.5	39.0	
Urea	mmol/l	20.7	17.6	23.8	1.55	3.10	Urease, kinetic
	mg/dl	124	105	143	9.50	19.0	
	mg/dl (BUN)	58.0	49.3	66.7	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.568	0.494	0.642	0.037	0.074	Uricase perox. no ascorb. ox.
	mg/dl	9.54	8.30	10.8	0.630	1.26	
	mmol/l	0.537	0.467	0.607	0.035	0.070	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	9.02	7.85	10.2	0.590	1.18	

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Roche AVL 9100 series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	112	103	121	4.50	9.00	ISE, direct
Lithium	mmol/l	2.19	1.93	2.45	0.130	0.260	ISE method - indirect
	mg/dl	1.52	1.34	1.70	0.090	0.180	
Potassium	mmol/l	6.14	5.65	6.63	0.245	0.490	ISE method - direct
Sodium	mmol/l	153	145	161	4.00	8.00	ISE method - direct

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HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	109	100	118	4.50	9.00	ISE, direct
Lactate	mmol/l	6.02	4.94	7.10	0.540	1.08	Enzymatic Electrode
	mg/dl	54.2	44.4	64.0	4.90	9.80	
Potassium	mmol/l	5.94	5.46	6.42	0.240	0.480	ISE method - direct
Sodium	mmol/l	152	144	160	4.00	8.00	ISE method - direct

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Roche Cobas c111

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

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

Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/l	31.2	26.5	35.9	2.35	4.70	Bromocresol Green
	g/dl	3.12	2.65	3.59	0.235	0.470	
Alkaline Phosphatase	U/l	351	298	404	26.5	53.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	123	98	148	12.5	25.0	Tris buffer without P5P
Amylase, Total	U/l	276	235	317	20.5	41.0	Roche liquid stable pNPG7
AST (GOT)	U/l	125	100	150	12.5	25.0	Tris buffer without P5P
Bilirubin, Direct	mg/dl	2.21	1.75	2.67	0.230	0.460	Dichlorophenyl Diazonium
	µmol/l	37.8	29.9	45.7	3.95	7.90	
	mg/dl	2.34	1.85	2.83	0.245	0.490	Roche DPD JG standardised
	µmol/l	40.0	31.6	48.4	4.20	8.40	
Bilirubin, Total	mg/dl	4.91	3.88	5.94	0.515	1.03	Dichlorophenyl Diazonium
	µmol/l	83.9	66.3	102	9.05	18.1	
Calcium	mmol/l	3.05	2.75	3.35	0.150	0.300	NM-BAPTA
	mg/dl	12.2	11.0	13.4	0.600	1.20	
Cholesterol	mmol/l	7.18	6.25	8.11	0.465	0.930	Cholesterol Oxidase - Abell Kendall
	mg/dl	277	241	313	18.0	36.0	
	mmol/l	7.43	6.46	8.40	0.485	0.970	Cholesterol Oxidase - IDMS
	mg/dl	287	250	324	18.5	37.0	
CK, Total	U/l	522	428	616	47.0	94.0	CK-NAC (IFCC)
Creatinine	mg/dl	4.10	3.28	4.92	0.410	0.820	Roche Creatinine Plus
	µmol/l	363	290	436	36.5	73.0	
gamma-GT	U/l	171	145	197	13.0	26.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.0	42.0	
HDL-Cholesterol	mmol/l	3.20	2.72	3.68	0.240	0.480	Direct HDL, Roche 4th gen.
	mg/dl	124	105	143	9.50	19.0	
LD (LDH)	U/l	401	341	461	30.0	60.0	L to P IFCC
Phosphate, Inorganic	mmol/l	2.26	1.92	2.60	0.170	0.340	Phosphomolybdate UV
	mg/dl	7.01	5.96	8.06	0.525	1.05	
Triglycerides	mmol/l	2.75	2.31	3.19	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.5	39.0	
Urea	mmol/l	20.6	17.5	23.7	1.55	3.10	Urease, kinetic
	mg/dl	124	105	143	9.50	19.0	
	mg/dl (BUN)	57.7	49.0	66.4	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.540	0.470	0.610	0.035	0.070	Uricase perox. no ascorb. ox.
	mg/dl	9.07	7.89	10.3	0.615	1.23	

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Roche Cobas c111

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	0.546	0.475	0.617	0.036	0.071	Uricase Perox. with ascorb. ox
	mg/dl	9.17	7.98	10.4	0.615	1.23	

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Roche Cobas c303/c503

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	31.4	26.7	36.1	2.35	4.70	Bromocresol Green
	g/dl	3.14	2.67	3.61	0.235	0.470	
	g/l	26.5	22.5	30.5	2.00	4.00	Turbidimetric Assays
	g/dl	2.65	2.25	3.05	0.200	0.400	
Alkaline Phosphatase	U/l	316	269	363	23.5	47.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	135	108	162	13.5	27.0	Tris buffer without P5P
Amylase, Pancreatic	U/l	243	207	279	18.0	36.0	Immunoinhibition, EPS substrate
Amylase, Total	U/l	269	229	309	20.0	40.0	Roche Integra 2-chloro-pNPG7
	U/l	271	230	312	20.5	41.0	Roche liquid stable pNPG7
AST (GOT)	U/l	154	123	185	15.5	31.0	Tris buffer without P5P
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bile Acids	µmol/l	40.8	32.6	49.0	4.10	8.20	Enzymatic Colorimetric
Bilirubin, Direct	mg/dl	2.39	1.89	2.89	0.250	0.500	Diazo with Sulphanilic Acid
	µmol/l	40.8	32.2	49.4	4.30	8.60	
	mg/dl	2.36	1.86	2.86	0.250	0.500	Dichlorophenyl Diazonium
	µmol/l	40.4	31.9	48.9	4.25	8.50	
	mg/dl	1.96	1.55	2.37	0.205	0.410	Roche DPD Doumas standardised
	µmol/l	33.5	26.5	40.5	3.50	7.00	
	mg/dl	2.38	1.88	2.88	0.250	0.500	Roche DPD JG standardised
	µmol/l	40.7	32.2	49.2	4.25	8.50	
Bilirubin, Total	mg/dl	4.75	3.75	5.75	0.500	1.00	Diazo with Sulphanilic Acid
	µmol/l	81.2	64.1	98.3	8.55	17.1	
	mg/dl	4.78	3.78	5.78	0.500	1.00	Diazonium ion
	µmol/l	81.7	64.5	98.9	8.60	17.2	
	mg/dl	4.79	3.78	5.80	0.505	1.01	Dichlorophenyl Diazonium
	µmol/l	81.8	64.6	99.0	8.60	17.2	
Calcium	mmol/l	3.04	2.74	3.34	0.150	0.300	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.600	1.20	
	mmol/l	3.08	2.77	3.39	0.155	0.310	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Chloride	mmol/l	107	98.4	116	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.51	6.53	8.49	0.490	0.980	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	252	328	19.0	38.0	
	mmol/l	7.48	6.51	8.45	0.485	0.970	Cholesterol Oxidase - IDMS
	mg/dl	289	251	327	19.0	38.0	
Cholinesterase	U/l	5275	4220	6330	528	1055	Colorimetric - Butyrylthiocholine
CK, Total	U/l	518	425	611	46.5	93.0	CK-NAC (IFCC)

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Roche Cobas c303/c503

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	mg/dl	4.02	3.22	4.82	0.400	0.800	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	356	285	427	35.5	71.0	
	mg/dl	4.00	3.20	4.80	0.400	0.800	Jaffe rate comp. (-18umol/l)
	µmol/l	354	283	425	35.5	71.0	
	mg/dl	4.23	3.38	5.08	0.425	0.850	Roche Creatinine Plus
	µmol/l	374	299	449	37.5	75.0	
gamma-GT	U/l	169	144	194	12.5	25.0	Gamma glut.-3-carb.-4-nitro.
	U/l	186	158	214	14.0	28.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.5	41.0	
HDL-Cholesterol	mmol/l	3.22	2.74	3.70	0.240	0.480	Direct HDL, Roche 4th gen.
	mg/dl	124	105	143	9.50	19.0	
Iron	µmol/l	38.1	31.2	45.0	3.45	6.90	Colorimetric with ppt.
	µg/dl	213	175	251	19.0	38.0	
	µmol/l	38.4	31.5	45.3	3.45	6.90	Colorimetric without ppt.
	µg/dl	215	176	254	19.5	39.0	
Lactate	mmol/l	5.60	4.59	6.61	0.505	1.01	Colorimetric - Lactate oxidase
	mg/dl	50.5	41.4	59.6	4.55	9.10	
LD (LDH)	U/l	396	337	455	29.5	59.0	L to P IFCC
Lipase	U/l	67	54	80	6.50	13.0	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	67	54	80	6.50	13.0	Colorimetric Roche ACN(8)789/ID 0-052
Lithium	mmol/l	2.21	1.94	2.48	0.135	0.270	Spectrophotometric
	mg/dl	1.53	1.35	1.71	0.090	0.180	
Magnesium	mmol/l	1.84	1.62	2.06	0.110	0.220	Chlorphosphonazo III
	mg/dl	4.47	3.93	5.01	0.270	0.540	
	mmol/l	1.84	1.62	2.06	0.110	0.220	Xylidyl Blue
	mg/dl	4.47	3.93	5.01	0.270	0.540	
Phosphate, Inorganic	mmol/l	2.22	1.89	2.55	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.88	5.85	7.91	0.515	1.03	
Potassium	mmol/l	6.09	5.60	6.58	0.245	0.490	ISE method - indirect
Protein, Total	g/l	44.8	35.8	53.8	4.50	9.00	Biuret reaction, end point
	g/dl	4.48	3.58	5.38	0.450	0.900	
	g/l	44.4	35.5	53.3	4.45	8.90	Biuret reaction, kinetic
	g/dl	4.44	3.55	5.33	0.445	0.890	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.5	34.4	52.6	4.55	9.10	Calculated from Transferrin
	µg/dl	243	192	294	25.5	51.0	
	µmol/l	39.3	31.0	47.6	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	220	174	266	23.0	46.0	

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Roche Cobas c303/c503

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Triglycerides	mmol/l	2.72	2.28	3.16	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	241	202	280	19.5	39.0	
Urea	mmol/l	21.2	18.0	24.4	1.60	3.20	Urease, kinetic
	mg/dl	127	108	146	9.50	19.0	
	mg/dl (BUN)	59.4	50.5	68.3	4.45	8.90	
Uric Acid (Urate)	mmol/l	0.522	0.454	0.590	0.034	0.068	Uricase perox. no ascorb. ox.
	mg/dl	8.77	7.63	9.91	0.570	1.14	
	mmol/l	0.520	0.452	0.588	0.034	0.068	Uricase Perox. with ascorb. ox
	mg/dl	8.74	7.60	9.88	0.570	1.14	
	mmol/l	0.524	0.456	0.592	0.034	0.068	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	8.80	7.66	9.94	0.570	1.14	

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Roche Cobas c311

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	31.4	26.7	36.1	2.35	4.70	Bromocresol Green
	g/dl	3.14	2.67	3.61	0.235	0.470	
Alkaline Phosphatase	U/l	337	286	388	25.5	51.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	130	104	156	13.0	26.0	Tris buffer without P5P
Amylase, Total	U/l	274	233	315	20.5	41.0	Roche liquid stable pNPG7
AST (GOT)	U/l	128	102	154	13.0	26.0	Tris buffer without P5P
Bilirubin, Direct	mg/dl	2.05	1.62	2.48	0.215	0.430	Dichlorophenyl Diazonium
	µmol/l	35.1	27.7	42.5	3.70	7.40	
	mg/dl	2.11	1.67	2.55	0.220	0.440	Roche DPD JG standardised
	µmol/l	36.1	28.5	43.7	3.80	7.60	
Bilirubin, Total	mg/dl	4.98	3.93	6.03	0.525	1.05	Diazonium ion
	µmol/l	85.1	67.2	103	8.95	17.9	
	mg/dl	4.90	3.87	5.93	0.515	1.03	Dichlorophenyl Diazonium
	µmol/l	83.8	66.2	101	8.60	17.2	
Calcium	mmol/l	3.08	2.77	3.39	0.155	0.310	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Chloride	mmol/l	107	98.4	116	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.52	6.54	8.50	0.490	0.980	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	252	328	19.0	38.0	
	mmol/l	7.44	6.47	8.41	0.485	0.970	Cholesterol Oxidase - IDMS
	mg/dl	287	250	324	18.5	37.0	
CK, Total	U/l	529	434	624	47.5	95.0	CK-NAC (IFCC)
Creatinine	mg/dl	3.94	3.15	4.73	0.395	0.790	Alkaline picrate no deproteinisation
	µmol/l	349	279	419	35.0	70.0	
	mg/dl	4.07	3.26	4.88	0.405	0.810	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	360	288	432	36.0	72.0	
	mg/dl	4.24	3.39	5.09	0.425	0.850	Roche Creatinine Plus
	µmol/l	375	300	450	37.5	75.0	
gamma-GT	U/l	188	160	216	14.0	28.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	233	315	20.5	41.0	
HDL-Cholesterol	mmol/l	3.18	2.70	3.66	0.240	0.480	Direct HDL, Roche 4th gen.
	mg/dl	123	105	141	9.00	18.0	
Iron	µmol/l	38.6	31.7	45.5	3.45	6.90	Colorimetric without ppt.
	µg/dl	216	177	255	19.5	39.0	
Lactate	mmol/l	5.66	4.64	6.68	0.510	1.02	Colorimetric - Lactate oxidase
	mg/dl	51.0	41.8	60.2	4.60	9.20	
LD (LDH)	U/l	394	335	453	29.5	59.0	L to P IFCC

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HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Lipase	U/l	67	54	80	6.50	13.0	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	66	53	79	6.50	13.0	Colorimetric Roche ACN(8)789/ID 0-052
Magnesium	mmol/l	1.83	1.61	2.05	0.110	0.220	Xylidyl Blue
	mg/dl	4.45	3.92	4.98	0.265	0.530	
Phosphate, Inorganic	mmol/l	2.24	1.90	2.58	0.170	0.340	Phosphomolybdate UV
	mg/dl	6.94	5.90	7.98	0.520	1.04	
Potassium	mmol/l	6.06	5.58	6.54	0.240	0.480	ISE method - indirect
Protein, Total	g/l	45.2	36.2	54.2	4.50	9.00	Biuret reaction, end point
	g/dl	4.52	3.62	5.42	0.450	0.900	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.74	2.30	3.18	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	242	203	281	19.5	39.0	
Urea	mmol/l	21.7	18.4	25.0	1.65	3.30	Urease, kinetic
	mg/dl	130	111	149	9.50	19.0	
	mg/dl (BUN)	60.8	51.7	69.9	4.55	9.10	
Uric Acid (Urate)	mmol/l	0.524	0.456	0.592	0.034	0.068	Uricase perox. no ascorb. ox.
	mg/dl	8.80	7.66	9.94	0.570	1.14	
	mmol/l	0.532	0.463	0.601	0.035	0.069	Uricase Perox. with ascorb. ox
	mg/dl	8.94	7.78	10.1	0.580	1.16	
	mmol/l	0.530	0.461	0.599	0.035	0.069	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	8.90	7.74	10.1	0.600	1.20	

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Roche Cobas c501/c502

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	31.4	26.7	36.1	2.35	4.70	Bromocresol Green
	g/dl	3.14	2.67	3.61	0.235	0.470	
	g/l	27.7	23.5	31.9	2.10	4.20	Bromocresol Purple
	g/dl	2.77	2.35	3.19	0.210	0.420	
Alkaline Phosphatase	U/l	343	292	394	25.5	51.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	130	104	156	13.0	26.0	Tris buffer without P5P
Amylase, Pancreatic	U/l	246	209	283	18.5	37.0	Roche liquid stable pNPG7
Amylase, Total	U/l	270	230	310	20.0	40.0	Roche Integra 2-chloro-pNPG7
	U/l	271	230	312	20.5	41.0	Roche liquid stable pNPG7
AST (GOT)	U/l	128	102	154	13.0	26.0	Tris buffer without P5P
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
	mmol/l	15.4	12.2	18.6	1.60	3.20	PEP Carboxylase
Bilirubin, Direct	mg/dl	2.11	1.67	2.55	0.220	0.440	Diazo with Sulphanilic Acid
	µmol/l	36.1	28.5	43.7	3.80	7.60	
	mg/dl	2.05	1.62	2.48	0.215	0.430	Dichlorophenyl Diazonium
	µmol/l	35.1	27.7	42.5	3.70	7.40	
	mg/dl	1.60	1.26	1.94	0.170	0.340	Roche (US calibrator only)
	µmol/l	27.3	21.6	33.0	2.85	5.70	
	mg/dl	2.11	1.67	2.55	0.220	0.440	Roche DPD JG standardised
	µmol/l	36.0	28.4	43.6	3.80	7.60	
Bilirubin, Total	mg/dl	4.91	3.88	5.94	0.515	1.03	Diazo with Sulphanilic Acid
	µmol/l	84.0	66.4	102	9.00	18.0	
	mg/dl	4.89	3.86	5.92	0.515	1.03	Diazonium ion
	µmol/l	83.6	66.0	101	8.70	17.4	
	mg/dl	4.87	3.85	5.89	0.510	1.02	Dichlorophenyl Diazonium
	µmol/l	83.2	65.7	101	8.90	17.8	
Calcium	mmol/l	3.08	2.77	3.39	0.155	0.310	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.600	1.20	
	mmol/l	3.07	2.76	3.38	0.155	0.310	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Chloride	mmol/l	107	98.4	116	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.50	6.53	8.47	0.485	0.970	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	252	328	19.0	38.0	
	mmol/l	7.48	6.51	8.45	0.485	0.970	Cholesterol Oxidase - IDMS
	mg/dl	289	251	327	19.0	38.0	
Cholinesterase	U/l	5399	4319	6479	540	1080	Colorimetric - Butyrylthiocholine
CK, Total	U/l	522	428	616	47.0	94.0	CK-NAC (IFCC)
	U/l	534	438	630	48.0	96.0	CK-NAC substrate start (DGKC)

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

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Roche Cobas c501/c502

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	529	434	624	47.5	95.0	Creatine phosphate substrate start
Creatinine	mg/dl	4.01	3.21	4.81	0.400	0.800	Alkaline picrate no deproteinisation
	µmol/l	355	284	426	35.5	71.0	
	mg/dl	4.01	3.21	4.81	0.400	0.800	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	355	284	426	35.5	71.0	
	mg/dl	3.97	3.18	4.76	0.395	0.790	Jaffe rate comp. (-18umol/l)
	µmol/l	351	281	421	35.0	70.0	
	mg/dl	4.19	3.35	5.03	0.420	0.840	Roche Creatinine Plus
	µmol/l	371	297	445	37.0	74.0	
D-3-Hydroxybutyrate	mmol/l	1.17	0.995	1.35	0.090	0.180	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	162	138	186	12.0	24.0	Gamma glut.-3-carb.-4-nitro.
	U/l	185	157	213	14.0	28.0	Gamma glut`3-carb`4-nitro(IFCC)
GLDH	U/l	31	24	38	3.50	7.00	Triethanolamine buffer
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.5	41.0	
HDL-Cholesterol	mmol/l	3.16	2.69	3.63	0.235	0.470	Direct HDL, Roche 4th gen.
	mg/dl	122	104	140	9.00	18.0	
Iron	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric with ppt.
	µg/dl	217	178	256	19.5	39.0	
	µmol/l	38.6	31.7	45.5	3.45	6.90	Colorimetric without ppt.
	µg/dl	216	177	255	19.5	39.0	
Lactate	mmol/l	5.62	4.61	6.63	0.505	1.01	Colorimetric - Lactate oxidase
	mg/dl	50.6	41.5	59.7	4.55	9.10	
LD (LDH)	U/l	393	334	452	29.5	59.0	L to P IFCC
	U/l	403	343	463	30.0	60.0	Lactate to Pyruvate methods
Lipase	U/l	68	55	81	6.50	13.0	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	69	55	83	7.00	14.0	Colorimetric Roche ACN(8)789/ID 0-052
Lithium	mmol/l	2.16	1.90	2.42	0.130	0.260	Spectrophotometric
	mg/dl	1.50	1.32	1.68	0.090	0.180	
Magnesium	mmol/l	1.83	1.61	2.05	0.110	0.220	Chlorphosphonazo III
	mg/dl	4.45	3.92	4.98	0.265	0.530	
	mmol/l	1.83	1.61	2.05	0.110	0.220	Xylidyl Blue
	mg/dl	4.45	3.92	4.98	0.265	0.530	
Phosphate, Inorganic	mmol/l	2.22	1.89	2.55	0.165	0.330	Phosphomolybdate enzymatic
	mg/dl	6.88	5.85	7.91	0.515	1.03	
	mmol/l	2.21	1.88	2.54	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.85	5.82	7.88	0.515	1.03	
Potassium	mmol/l	6.09	5.60	6.58	0.245	0.490	ISE method - indirect

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Roche Cobas c501/c502

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Lot. No: 1340UE Cat. No: HE1532 / 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	44.8	35.8	53.8	4.50	9.00	Biuret reaction, end point
	g/dl	4.48	3.58	5.38	0.450	0.900	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
TIBC	µmol/l	46.2	36.5	55.9	4.85	9.70	Calculated from Transferrin
	µg/dl	258	204	312	27.0	54.0	
	µmol/l	40.5	32.0	49.0	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	226	179	273	23.5	47.0	
Triglycerides	mmol/l	2.69	2.26	3.12	0.215	0.430	Lipase/GK UV. no correction
	mg/dl	238	200	276	19.0	38.0	
	mmol/l	2.72	2.28	3.16	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	241	202	280	19.5	39.0	
Urea	mmol/l	21.5	18.3	24.7	1.60	3.20	Urease, kinetic
	mg/dl	129	110	148	9.50	19.0	
	mg/dl (BUN)	60.2	51.2	69.2	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.518	0.451	0.585	0.034	0.067	Uricase perox. no ascorb. ox.
	mg/dl	8.70	7.57	9.83	0.565	1.13	
	mmol/l	0.521	0.453	0.589	0.034	0.068	Uricase Perox. with ascorb. ox
	mg/dl	8.75	7.61	9.89	0.570	1.14	
	mmol/l	0.522	0.454	0.590	0.034	0.068	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	8.77	7.63	9.91	0.570	1.14	

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RANDOX

Roche Cobas c701/c702/c711

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	31.8	27.0	36.6	2.40	4.80	Bromocresol Green
	g/dl	3.18	2.70	3.66	0.240	0.480	
	g/l	27.1	23.0	31.2	2.05	4.10	Bromocresol Purple
	g/dl	2.71	2.30	3.12	0.205	0.410	
Alkaline Phosphatase	U/l	344	292	396	26.0	52.0	Colorimetric
	U/l	335	285	385	25.0	50.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	133	106	160	13.5	27.0	Colorimetric
	U/l	129	103	155	13.0	26.0	Tris buffer without P5P
Amylase, Pancreatic	U/l	245	208	282	18.5	37.0	Roche liquid stable pNPG7
Amylase, Total	U/l	273	232	314	20.5	41.0	Roche liquid stable pNPG7
AST (GOT)	U/l	127	102	152	12.5	25.0	Tris buffer without P5P
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
Bile Acids	µmol/l	48.1	38.5	57.7	4.80	9.60	Enzymatic Colorimetric
Bilirubin, Direct	mg/dl	2.12	1.67	2.57	0.225	0.450	Dichlorophenyl Diazonium
	µmol/l	36.2	28.6	43.8	3.80	7.60	
	mg/dl	1.76	1.39	2.13	0.185	0.370	Oxidation to Biliverdin/Vanadate
	µmol/l	30.0	23.7	36.3	3.15	6.30	
	mg/dl	1.73	1.37	2.09	0.180	0.360	Roche DPD Doumas standardised
	µmol/l	29.6	23.4	35.8	3.10	6.20	
	mg/dl	2.14	1.69	2.59	0.225	0.450	Roche DPD JG standardised
	µmol/l	36.6	28.9	44.3	3.85	7.70	
Bilirubin, Total	mg/dl	4.94	3.90	5.98	0.520	1.04	Diazonium ion
	µmol/l	84.4	66.7	102	8.80	17.6	
	mg/dl	4.97	3.93	6.01	0.520	1.04	Dichlorophenyl Diazonium
	µmol/l	85.0	67.2	103	9.00	18.0	
Calcium	mmol/l	3.07	2.76	3.38	0.155	0.310	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.600	1.20	
	mmol/l	3.07	2.76	3.38	0.155	0.310	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.600	1.20	
Chloride	mmol/l	108	99.4	117	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.48	6.51	8.45	0.485	0.970	Cholesterol Oxidase - Abell Kendall
	mg/dl	289	251	327	19.0	38.0	
	mmol/l	7.54	6.56	8.52	0.490	0.980	Cholesterol Oxidase - IDMS
	mg/dl	291	253	329	19.0	38.0	
Cholinesterase	U/l	5386	4309	6463	539	1077	Colorimetric - Butyrylthiocholine
CK, Total	U/l	525	431	619	47.0	94.0	CK-NAC (IFCC)
Creatinine	mg/dl	3.98	3.18	4.78	0.400	0.800	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	352	282	422	35.0	70.0	

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RANDOX

Roche Cobas c701/c702/c711

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	mg/dl	4.23	3.38	5.08	0.425	0.850	Roche Creatinine Plus
	µmol/l	374	299	449	37.5	75.0	
gamma-GT	U/l	160	136	184	12.0	24.0	Gamma glut.-3-carb.-4-nitro.
	U/l	181	154	208	13.5	27.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.5	41.0	
HDL-Cholesterol	mmol/l	3.13	2.66	3.60	0.235	0.470	Direct HDL, Roche 4th gen.
	mg/dl	121	103	139	9.00	18.0	
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric with ppt.
	µg/dl	214	175	253	19.5	39.0	
	µmol/l	38.0	31.2	44.8	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.0	38.0	
Lactate	mmol/l	5.59	4.58	6.60	0.505	1.01	Colorimetric - Lactate oxidase
	mg/dl	50.4	41.3	59.5	4.55	9.10	
LD (LDH)	U/l	396	337	455	29.5	59.0	L to P IFCC
Lipase	U/l	71	57	85	7.00	14.0	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	70	56	84	7.00	14.0	Colorimetric Roche ACN(8)789/ID 0-052
Lithium	mmol/l	2.14	1.88	2.40	0.130	0.260	Spectrophotometric
	mg/dl	1.49	1.31	1.67	0.090	0.180	
Magnesium	mmol/l	1.83	1.61	2.05	0.110	0.220	Xylidyl Blue
	mg/dl	4.45	3.92	4.98	0.265	0.530	
Phosphate, Inorganic	mmol/l	2.20	1.87	2.53	0.165	0.330	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.510	1.02	
Potassium	mmol/l	6.04	5.56	6.52	0.240	0.480	ISE method - indirect
Protein, Total	g/l	44.9	35.9	53.9	4.50	9.00	Biuret reaction, end point
	g/dl	4.49	3.59	5.39	0.450	0.900	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
TIBC	µmol/l	41.3	32.6	50.0	4.35	8.70	Calculated from Transferrin
	µg/dl	231	182	280	24.5	49.0	
	µmol/l	41.5	32.8	50.2	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	232	183	281	24.5	49.0	
Triglycerides	mmol/l	2.75	2.31	3.19	0.220	0.440	Lipase/GK UV. no correction
	mg/dl	243	204	282	19.5	39.0	
	mmol/l	2.73	2.29	3.17	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	242	203	281	19.5	39.0	
Urea	mmol/l	21.4	18.2	24.6	1.60	3.20	Urease, kinetic
	mg/dl	129	110	148	9.50	19.0	
	mg/dl (BUN)	59.9	50.9	68.9	4.50	9.00	

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Lot. No: 1340UE Cat. No: HE1532 / 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	0.521	0.453	0.589	0.034	0.068	Uricase perox. no ascorb. ox.
	mg/dl	8.75	7.61	9.89	0.570	1.14	
	mmol/l	0.518	0.451	0.585	0.034	0.067	Uricase Perox. with ascorb. ox
	mg/dl	8.70	7.57	9.83	0.565	1.13	
	mmol/l	0.521	0.453	0.589	0.034	0.068	Uricase Perox. with ascorb. ox @ 546nm
	mg/dl	8.75	7.61	9.89	0.570	1.14	

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Roche Cobas e402/ e801

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	94.5	70.9	118	11.8	23.5	Roche Cobas e402/e801
	pg/ml	73.7	55.3	92.1	9.20	18.4	
	ng/dl	7.37	5.53	9.21	0.920	1.84	
PSA, Total	ng/ml	18.2	13.7	22.7	2.25	4.50	Roche Cobas e402/e801
Thyroid Stimulating Hormone (TSH)	µU/ml	1.35	1.08	1.62	0.135	0.270	Roche Cobas e402/e801
Total T4	nmol/l	241	181	301	30.0	60.0	Roche Cobas e402/e801
	ng/ml	188	141	235	23.5	47.0	
	µg/dl	18.8	14.1	23.5	2.35	4.70	

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Roche Cobas e411

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	93.4	70.1	117	11.8	23.6	Roche Cobas 4000/e411
	pg/ml	72.9	54.7	91.1	9.10	18.2	
	ng/dl	7.29	5.47	9.11	0.910	1.82	
PSA, Total	ng/ml	19.3	14.5	24.1	2.40	4.80	Roche Cobas 4000/e411
Thyroid Stimulating Hormone (TSH)	µU/ml	1.45	1.16	1.74	0.145	0.290	Roche Cobas 4000/e411
Total T4	nmol/l	247	185	309	31.0	62.0	Roche Cobas 4000/e411
	ng/ml	193	145	241	24.0	48.0	
	µg/dl	19.3	14.5	24.1	2.40	4.80	

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Roche Cobas e601/602

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
PSA, Total	ng/ml	18.8	14.1	23.5	2.35	4.70	Roche Cobas e601/602
Thyroid Stimulating Hormone (TSH)	µU/ml	1.35	1.08	1.62	0.135	0.270	Roche Cobas e601/ 602
Total T4	nmol/l	240	180	300	30.0	60.0	Roche Cobas e601/ 602
	ng/ml	187	140	234	23.5	47.0	
	µg/dl	18.7	14.0	23.4	2.35	4.70	

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RANDOX

Roche Integra

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	31.9	27.1	36.7	2.40	4.80	Bromocresol Green
	g/dl	3.19	2.71	3.67	0.240	0.480	
Alkaline Phosphatase	U/l	349	297	401	26.0	52.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	125	100	150	12.5	25.0	Tris buffer without P5P
Amylase, Total	U/l	273	232	314	20.5	41.0	BM/Roche Colorimetric pNPG7
	U/l	277	235	319	21.0	42.0	Roche Integra 2-chloro-pNPG7
	U/l	277	235	319	21.0	42.0	Roche liquid stable pNPG7
AST (GOT)	U/l	124	99	149	12.5	25.0	Tris buffer without P5P
Bilirubin, Direct	mg/dl	2.14	1.69	2.59	0.225	0.450	Diazo with Sulphanilic Acid
	µmol/l	36.6	28.9	44.3	3.85	7.70	
	mg/dl	2.17	1.71	2.63	0.230	0.460	Dichlorophenyl Diazonium
	µmol/l	37.1	29.3	44.9	3.90	7.80	
	mg/dl	2.17	1.71	2.63	0.230	0.460	Roche DPD JG standardised
	µmol/l	37.1	29.3	44.9	3.90	7.80	
Bilirubin, Total	mg/dl	4.93	3.89	5.97	0.520	1.04	Diazo with Sulphanilic Acid
	µmol/l	84.2	66.5	102	8.90	17.8	
	mg/dl	4.91	3.88	5.94	0.515	1.03	Diazonium ion
	µmol/l	83.9	66.3	102	9.05	18.1	
	mg/dl	5.00	3.95	6.05	0.525	1.05	Dichlorophenyl Diazonium
	µmol/l	85.4	67.5	103	8.80	17.6	
Calcium	mmol/l	3.10	2.79	3.41	0.155	0.310	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.600	1.20	
	mmol/l	3.10	2.79	3.41	0.155	0.310	NM-BAPTA
	mg/dl	12.4	11.2	13.6	0.600	1.20	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.41	6.45	8.37	0.480	0.960	Cholesterol Oxidase - Abell Kendall
	mg/dl	286	249	323	18.5	37.0	
	mmol/l	7.33	6.38	8.28	0.475	0.950	Cholesterol Oxidase - IDMS
	mg/dl	283	246	320	18.5	37.0	
CK, Total	U/l	524	430	618	47.0	94.0	CK-NAC (IFCC)
Creatinine	mg/dl	3.89	3.11	4.67	0.390	0.780	Alkaline picrate no deproteinisation
	µmol/l	344	275	413	34.5	69.0	
	mg/dl	3.79	3.03	4.55	0.380	0.760	Alkaline picrate with deproteinisation
	µmol/l	335	268	402	33.5	67.0	
	mg/dl	3.84	3.07	4.61	0.385	0.770	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	340	272	408	34.0	68.0	
	mg/dl	3.89	3.11	4.67	0.390	0.780	Jaffe rate comp. (-18umol/l)
	µmol/l	344	275	413	34.5	69.0	

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Roche Integra

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Creatinine	mg/dl	4.09	3.27	4.91	0.410	0.820	Roche Creatinine Plus
	µmol/l	362	290	434	36.0	72.0	
gamma-GT	U/l	164	139	189	12.5	25.0	Gamma glut.-3-carb.-4-nitro.
	U/l	185	157	213	14.0	28.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.0	42.0	
HDL-Cholesterol	mmol/l	3.28	2.79	3.77	0.245	0.490	Direct HDL, Roche 4th gen.
	mg/dl	127	108	146	9.50	19.0	
Iron	µmol/l	39.2	32.1	46.3	3.55	7.10	Colorimetric with ppt.
	µg/dl	219	180	258	19.5	39.0	
	µmol/l	39.3	32.2	46.4	3.55	7.10	Colorimetric without ppt.
	µg/dl	220	180	260	20.0	40.0	
Lactate	mmol/l	5.64	4.62	6.66	0.510	1.02	Colorimetric - Lactate oxidase
	mg/dl	50.8	41.7	59.9	4.55	9.10	
LD (LDH)	U/l	400	340	460	30.0	60.0	L to P IFCC
Lipase	U/l	66	53	79	6.50	13.0	Colorimetric Roche ACN(8)731/ID 0-100
	U/l	69	55	83	7.00	14.0	Colorimetric Roche ACN(8)789/ID 0-052
Magnesium	mmol/l	1.81	1.59	2.03	0.110	0.220	Chlorphosphonazo III
	mg/dl	4.40	3.87	4.93	0.265	0.530	
	mmol/l	1.79	1.58	2.00	0.105	0.210	Xylidyl Blue
	mg/dl	4.35	3.83	4.87	0.260	0.520	
Phosphate, Inorganic	mmol/l	2.28	1.94	2.62	0.170	0.340	Phosphomolybdate enzymatic
	mg/dl	7.07	6.01	8.13	0.530	1.06	
	mmol/l	2.30	1.96	2.64	0.170	0.340	Phosphomolybdate UV
	mg/dl	7.13	6.06	8.20	0.535	1.07	
Potassium	mmol/l	6.04	5.56	6.52	0.240	0.480	ISE method - indirect
Protein, Total	g/l	43.4	34.7	52.1	4.35	8.70	Biuret reaction, end point
	g/dl	4.34	3.47	5.21	0.435	0.870	
	g/l	43.8	35.0	52.6	4.40	8.80	Biuret reaction, kinetic
	g/dl	4.38	3.50	5.26	0.440	0.880	
Sodium	mmol/l	154	146	162	4.00	8.00	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	2.75	2.31	3.19	0.220	0.440	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.5	39.0	
Urea	mmol/l	20.9	17.8	24.0	1.55	3.10	Urease, kinetic
	mg/dl	126	107	145	9.50	19.0	
	mg/dl (BUN)	58.5	49.7	67.3	4.40	8.80	

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Roche Integra

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / 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	0.541	0.471	0.611	0.035	0.070	Uricase perox. no ascorb. ox.
	mg/dl	9.09	7.91	10.3	0.605	1.21	
	mmol/l	0.545	0.474	0.616	0.036	0.071	Uricase Perox. with ascorb. ox
	mg/dl	9.16	7.97	10.4	0.620	1.24	

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Sensa Core ST series

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Chloride	mmol/l	108	99.4	117	4.50	9.00	ISE, direct
Potassium	mmol/l	5.68	5.23	6.13	0.225	0.450	ISE method - direct
Sodium	mmol/l	147	140	154	3.50	7.00	ISE method - direct

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Siemens / Bayer

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Lactate	mmol/l	6.53	5.35	7.71	0.590	1.18	Ion Selective Electrode
	mg/dl	58.8	48.2	69.4	5.30	10.6	

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Siemens ADVIA Chemistry Instruments

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Green
	g/dl	2.94	2.50	3.38	0.220	0.440	
Alkaline Phosphatase	U/l	311	264	358	23.5	47.0	AMP optimised to IFCC
ALT (GPT)	U/l	152	122	182	15.0	30.0	Tris buffer without P5P
Amylase, Total	U/l	277	235	319	21.0	42.0	Siemens - blocked pNPG7
AST (GOT)	U/l	143	114	172	14.5	29.0	Tris buffer without P5P
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bilirubin, Direct	mg/dl	1.99	1.57	2.41	0.210	0.420	Oxidation to Biliverdin/Vanadate
	µmol/l	34.0	26.9	41.1	3.55	7.10	
Bilirubin, Total	mg/dl	5.91	4.67	7.15	0.620	1.24	Oxidation to Biliverdin/Vanadate
	µmol/l	101	79.8	122	10.5	21.0	
Calcium	mmol/l	3.02	2.72	3.32	0.150	0.300	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.600	1.20	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.54	6.56	8.52	0.490	0.980	Cholesterol Oxidase - Abell Kendall
	mg/dl	291	253	329	19.0	38.0	
CK, Total	U/l	533	437	629	48.0	96.0	CK-NAC (IFCC)
Creatinine	mg/dl	3.90	3.12	4.68	0.390	0.780	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	345	276	414	34.5	69.0	
gamma-GT	U/l	175	149	201	13.0	26.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	14.9	12.7	17.1	1.10	2.20	Glucose oxidase
	mg/dl	268	228	308	20.0	40.0	
	mmol/l	14.8	12.6	17.0	1.10	2.20	Hexokinase
	mg/dl	267	227	307	20.0	40.0	
HDL-Cholesterol	mmol/l	2.23	1.90	2.56	0.165	0.330	Direct HDL, Clearance method
	mg/dl	86.1	73.2	99.0	6.45	12.9	
Iron	µmol/l	38.6	31.7	45.5	3.45	6.90	Colorimetric without ppt.
	µg/dl	216	177	255	19.5	39.0	
LD (LDH)	U/l	387	329	445	29.0	58.0	L to P IFCC
Magnesium	mmol/l	1.72	1.51	1.93	0.105	0.210	Xylidyl Blue
	mg/dl	4.18	3.68	4.68	0.250	0.500	
Phosphate, Inorganic	mmol/l	2.30	1.96	2.64	0.170	0.340	Phosphomolybdate UV
	mg/dl	7.13	6.06	8.20	0.535	1.07	
Potassium	mmol/l	6.11	5.62	6.60	0.245	0.490	ISE method - indirect
Protein, Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction, end point
	g/dl	4.54	3.63	5.45	0.455	0.910	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect

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Siemens ADVIA Chemistry Instruments

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Triglycerides	mmol/l	2.83	2.38	3.28	0.225	0.450	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.0	40.0	
Urea	mmol/l	22.0	18.7	25.3	1.65	3.30	Urease, kinetic
	mg/dl	132	112	152	10.0	20.0	
	mg/dl (BUN)	61.6	52.4	70.8	4.60	9.20	
Uric Acid (Urate)	mmol/l	0.538	0.468	0.608	0.035	0.070	Uricase perox. no ascorb. ox.
	mg/dl	9.04	7.86	10.2	0.580	1.16	

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Siemens Atellica Solution

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.220	0.440	
	g/l	27.2	23.1	31.3	2.05	4.10	Bromocresol Purple
	g/dl	2.72	2.31	3.13	0.205	0.410	
Alkaline Phosphatase	U/l	330	281	379	24.5	49.0	AMP optimised to IFCC
	U/l	340	289	391	25.5	51.0	Siemens Dimension AMP buffer
ALT (GPT)	U/l	151	121	181	15.0	30.0	Tris buffer without P5P
Amylase, Total	U/l	313	266	360	23.5	47.0	Siemens - blocked pNPG7
AST (GOT)	U/l	142	114	170	14.0	28.0	Tris buffer without P5P
Bicarbonate	mmol/l	17.6	14.0	21.2	1.80	3.60	Enzymatic
	mmol/l	17.0	13.5	20.5	1.75	3.50	PEP Carboxylase
Bilirubin, Direct	mg/dl	2.22	1.75	2.69	0.235	0.470	Oxidation to Biliverdin/Vanadate
	µmol/l	38.0	30.0	46.0	4.00	8.00	
Bilirubin, Total	mg/dl	6.20	4.90	7.50	0.650	1.30	Oxidation to Biliverdin/Vanadate
	µmol/l	106	83.7	128	11.0	22.0	
Calcium	mmol/l	3.05	2.75	3.35	0.150	0.300	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.600	1.20	
	mmol/l	3.17	2.85	3.49	0.160	0.320	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.650	1.30	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE, indirect
Cholesterol	mmol/l	7.66	6.66	8.66	0.500	1.00	Cholesterol Oxidase - Abell Kendall
	mg/dl	296	258	334	19.0	38.0	
	mmol/l	7.67	6.67	8.67	0.500	1.00	Cholesterol Oxidase - IDMS
	mg/dl	296	258	334	19.0	38.0	
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Glucose oxidase
	mg/dl	272	231	313	20.5	41.0	
	mmol/l	15.0	12.8	17.2	1.10	2.20	Hexokinase
	mg/dl	270	230	310	20.0	40.0	
HDL-Cholesterol	mmol/l	3.04	2.58	3.50	0.230	0.460	Direct HDL, Clearance method
	mg/dl	117	99.5	135	9.00	18.0	
	mmol/l	2.92	2.48	3.36	0.220	0.440	HDL Ultra/Accel Selective Detergent
	mg/dl	113	96.1	130	8.50	17.0	
Iron	µmol/l	39.0	32.0	46.0	3.50	7.00	Colorimetric without ppt.
	µg/dl	218	179	257	19.5	39.0	
Lactate	mmol/l	5.50	4.51	6.49	0.495	0.990	Colorimetric - Lactate oxidase
	mg/dl	49.6	40.7	58.5	4.45	8.90	
LD (LDH)	U/l	385	327	443	29.0	58.0	L to P IFCC
	U/l	384	326	442	29.0	58.0	Siemens Dimension L-P Non IFCC
Lipase	U/l	74	59	89	7.50	15.0	Other Colorimetric

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Siemens Atellica Solution

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Magnesium	mmol/l	1.81	1.59	2.03	0.110	0.220	Xylidyl Blue
	mg/dl	4.40	3.87	4.93	0.265	0.530	
Phosphate, Inorganic	mmol/l	2.34	1.99	2.69	0.175	0.350	Phosphomolybdate UV
	mg/dl	7.25	6.16	8.34	0.545	1.09	
Potassium	mmol/l	6.03	5.55	6.51	0.240	0.480	ISE method - indirect
Protein, Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction, end point
	g/dl	4.60	3.68	5.52	0.460	0.920	
PSA, Total	ng/ml	17.8	13.4	22.2	2.20	4.40	Siemens Atellica IM
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone (TSH)	µU/ml	1.15	0.920	1.38	0.115	0.230	Siemens Atellica IM
TIBC	µmol/l	48.0	37.9	58.1	5.05	10.1	Direct Colorimetric
	µg/dl	268	212	324	28.0	56.0	
Triglycerides	mmol/l	2.81	2.36	3.26	0.225	0.450	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.0	40.0	
	mmol/l	2.77	2.33	3.21	0.220	0.440	Siemens Atellica IM
	mg/dl	245	206	284	19.5	39.0	
Urea	mmol/l	21.9	18.6	25.2	1.65	3.30	Urease, kinetic
	mg/dl	132	112	152	10.0	20.0	
	mg/dl (BUN)	61.3	52.1	70.5	4.60	9.20	
Uric Acid (Urate)	mmol/l	0.548	0.477	0.619	0.036	0.071	Uricase perox. no ascorb. ox.
	mg/dl	9.21	8.01	10.4	0.595	1.19	

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Siemens Dimension RxL/Max/Xpand

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Bilirubin, Total	mg/dl	5.46	4.31	6.61	0.575	1.15	Diazo with Sulphanilic Acid
	µmol/l	93.4	73.8	113	9.80	19.6	
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	241	325	21.0	42.0	
Urea	mmol/l	22.3	19.0	25.6	1.65	3.30	Urease, kinetic
	mg/dl	134	114	154	10.0	20.0	
	mg/dl (BUN)	62.5	53.1	71.9	4.70	9.40	

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Single Beam Instruments

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Copper	µmol/l	28.3	22.6	34.0	2.85	5.70	Atomic absorption
	µg/dl	180	144	216	18.0	36.0	

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

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Thermo Konelab 20/30/60/Indiko

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	**Unit**	**Target**	**Low**	**High**	**1SD**	**2SD**	**Method**
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.220	0.440	
Alkaline Phosphatase	U/l	369	314	424	27.5	55.0	AMP optimised to IFCC
ALT (GPT)	U/l	145	116	174	14.5	29.0	Tris buffer without P5P
AST (GOT)	U/l	142	114	170	14.0	28.0	Tris buffer without P5P
Calcium	mmol/l	3.14	2.83	3.45	0.155	0.310	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.650	1.30	
Cholesterol	mmol/l	7.63	6.64	8.62	0.495	0.990	Cholesterol Oxidase - Abell Kendall
	mg/dl	295	257	333	19.0	38.0	
CK, Total	U/l	539	442	636	48.5	97.0	CK-NAC (IFCC)
gamma-GT	U/l	185	157	213	14.0	28.0	Gamma glut`3-carb`4-nitro(IFCC)
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	239	323	21.0	42.0	
Magnesium	mmol/l	1.77	1.56	1.98	0.105	0.210	Xylidyl Blue
	mg/dl	4.30	3.78	4.82	0.260	0.520	
Phosphate, Inorganic	mmol/l	2.28	1.94	2.62	0.170	0.340	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.530	1.06	
Potassium	mmol/l	5.98	5.50	6.46	0.240	0.480	ISE method - direct
Protein, Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction, end point
	g/dl	4.64	3.71	5.57	0.465	0.930	
Sodium	mmol/l	152	144	160	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.86	2.40	3.32	0.230	0.460	Lipase/GPO-PAP no correction
	mg/dl	253	213	293	20.0	40.0	
Urea	mmol/l	21.5	18.3	24.7	1.60	3.20	Urease, kinetic
	mg/dl	129	110	148	9.50	19.0	
	mg/dl (BUN)	60.2	51.2	69.2	4.50	9.00	

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RANDOX

Trident Med Chloridemeter

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

Lot. No: 1340UE Cat. No: HE1532 / HS2611 Expiry: 2028-01-28

Size: 20 x 5ml / 5 x 5ml

			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Osmolality	mOsm/kg	379	303	455	38.0	76.0	Freezing point depression

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