RANDOX 0843 CE

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

CAT. NO. HN1530 / HS2611 **LOT NO.** 948UN
SIZE: 20 x 5 ml / 5 x 5 ml **EXPIRY:** 2018-07

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 -20°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 (25 - 30 µl) of 0.7M Acetic acid solution to 1 ml 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 -20°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.
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 -20°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.

PREPARATION FOR USE
The Human Assayed Multi-sera is supplied lyophilised.
1. Carefully reconstitute each vial of lyophilised serum with exactly 5 ml 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 the formation of foam. Do not shake.
2. Refer to the Control section of the individual analyser application.
3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

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

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

ASSIGNED VALUES

Each batch of assayed human serum is submitted to reference laboratories for assignment against international Reference Standards. Where international Reference Standards are unavailable, Reference Methods are used. Values are also collected from approx. 3000 laboratories worldwide and using a unique statistical analysis, a value is assigned.

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. This results in an assayed serum with extremely accurate values, which may be confidently used by laboratories to ensure the accuracy of their methods.

If an instrument specific value is not available, refer to the Mean of all Instruments 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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ABBOTT AEROSET®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.86	4.23	5.49	0.32	0.63	Cholesterol Oxidase
	mg/dl	188	163	213	12.50	25.00	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE direct
CK Total	U/l	218	179	257	19.50	39.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	118	94.6	141	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
Glucose	mmol/l	7.01	5.96	8.06	0.53	1.05	Hexokinase
	mg/dl	126	107	145	9.50	19.00	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	225	191	259	17.00	34.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	1.38	1.18	1.58	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.28	3.66	4.90	0.31	0.62	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - direct
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.35	6.24	8.46	0.56	1.11	Urease hypochlorite
	mg/dl	44.2	37.5	50.9	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Purple
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	126	107	145	9.50	19.00	AMP optimised to IFCC 37°C
	U/l	124	106	142	9.00	18.00	AMP non-optimised 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	97	82	112	7.50	15.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	28.2	22.6	33.8	2.80	5.60	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.889	1.35	0.12	0.23	
	µmol/l	19.1	15.0	23.2	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.12	0.878	1.36	0.12	0.24	
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.26	1.92	0.17	0.33	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	26.4	20.8	32.0	2.80	5.60	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
Cholesterol	mmol/l	4.75	4.14	5.36	0.31	0.61	Cholesterol Oxidase
	mg/dl	183	160	206	11.50	23.00	
Chloride	mmol/l	99.3	91.3	107	4.00	8.00	ISE indirect
CK Total	U/l	223	183	263	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	124	99.1	149	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	125	99.8	150	12.60	25.20	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	99.2	149	12.40	24.80	IDMS traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	
Free T4	pmol/l	17.0	12.7	21.3	2.15	4.30	Abbott Architect
	ng/dl	1.33	0.991	1.67	0.17	0.34	
	pg/ml	13.3	9.91	16.7	1.70	3.39	Abbott Architect
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	57	48	66	4.50	9.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.96	5.91	8.01	0.53	1.05	Hexokinase
	mg/dl	125	106	144	9.50	19.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct HDL PPD
	mg/dl	59.8	51.0	68.6	4.40	8.80	
	mmol/l	1.62	1.37	1.87	0.13	0.25	Direct Clearance Method
	mg/dl	62.5	52.9	72.1	4.80	9.60	
	mmol/l	1.58	1.35	1.81	0.12	0.23	HDL - Ultra
	mg/dl	61.0	52.1	69.9	4.45	8.90	
Iron	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	88.3	126	9.35	18.70	
	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
Lactate	mmol/l	1.60	1.31	1.89	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.4	11.8	17.0	1.30	2.60	
LD (LDH)	U/l	224	191	257	16.50	33.00	L->P 37°C
	U/l	226	192	260	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	44	36	52	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.633	0.797	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Arsenazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Enzymatic
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.7	48.5	72.9	6.10	12.20	Biuret reaction end point
	g/dl	6.07	4.85	7.29	0.61	1.22	
	g/l	61.1	48.8	73.4	6.15	12.30	Biuret reaction kinetic
	g/dl	6.11	4.88	7.34	0.62	1.23	
PSA Total	ng/ml =	15.2	11.4	19.0	1.90	3.80	Abbott Architect
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.12	0.89	1.35	0.11	0.23	Abbott Architect
TIBC	µmol/l	46.4	36.7	56.1	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	259	205	313	27.00	54.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.8	113	7.80	15.60	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.1	111	7.75	15.50	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease end point
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.19	6.12	8.26	0.54	1.07	Urease kinetic
	mg/dl	43.2	36.8	49.6	3.20	6.40	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	40.5	34.5	46.5	3.00	6.00	Bromocresol Green
	g/dl	4.05	3.45	4.65	0.30	0.60	
Alkaline Phosphatase	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	21.4	16.9	25.9	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.25	0.989	1.51	0.13	0.26	
Bilirubin Total	µmol/l	27.4	21.7	33.1	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.27	1.93	0.17	0.33	
Calcium	mmol/l	2.27	2.04	2.50	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.10	8.18	10.0	0.46	0.92	
Cholesterol	mmol/l	4.73	4.12	5.34	0.31	0.61	Cholesterol Oxidase
	mg/dl	183	159	207	12.00	24.00	
CK Total	U/l	220	180	260	20.00	40.00	CK-NAC (IFCC) 37°C
Glucose	mmol/l	7.21	6.13	8.29	0.54	1.08	Glucose oxidase
	mg/dl	130	110	150	10.00	20.00	
HDL - Cholesterol	mmol/l	1.65	1.40	1.90	0.13	0.25	Direct HDL PPD
	mg/dl	63.7	54.0	73.4	4.85	9.70	
Phosphate Inorganic	mmol/l	1.63	1.39	1.87	0.12	0.24	Phosphomolybdate UV
	mg/dl	5.05	4.31	5.79	0.37	0.74	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - direct

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	61.2	48.9	73.5	6.15	12.30	Biuret reaction end point
	g/dl	6.12	4.89	7.35	0.62	1.23	
Sodium	mmol/l	144	136	152	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	1.18	0.99	1.37	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.9	120	8.05	16.10	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	

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RANDOX

Alfa Wassermann Alfa 600/Analyticon Biolyzer 600 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07 Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.9	35.6	48.2	3.15	6.30	Bromocresol Green
	g/dl	4.19	3.56	4.82	0.32	0.63	
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.33	2.09	2.57	0.12	0.24	Arsenazo III
	mg/dl	9.34	8.38	10.3	0.48	0.96	
Cholesterol	mmol/l	4.55	3.96	5.14	0.30	0.59	Cholesterol Oxidase
	mg/dl	176	153	199	11.50	23.00	
Creatinine	µmol/l	122	97.4	147	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
Glucose	mmol/l	6.92	5.88	7.96	0.52	1.04	Hexokinase
	mg/dl	125	106	144	9.50	19.00	
Protein Total	g/l	59.6	47.7	71.5	5.95	11.90	Biuret reaction end point
	g/dl	5.96	4.77	7.15	0.60	1.19	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.1	117	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	

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Alfa Wassermann Alfa 600/Analyticon Biolyzer 600 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	149	127	171	11.00	22.00	p-Nitrophenylphosphate AMP 37°C
	U/l	220	187	253	16.50	33.00	Diethanolamine buffer DEA 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	88	75	101	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Beckman maltotetraose 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	21.2	16.8	25.6	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.24	0.983	1.50	0.13	0.26	
Bilirubin Total	µmol/l	29.7	23.5	35.9	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	29.7	23.5	35.9	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	29.4	23.3	35.5	3.05	6.10	Oxidation to Biliverdin
	mg/dl	1.72	1.36	2.08	0.18	0.36	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.33	2.10	2.56	0.12	0.23	Arsenazo III
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.29	2.06	2.52	0.12	0.23	NM-BAPTA
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Cholesterol	mmol/l	4.78	4.16	5.40	0.31	0.62	Cholesterol Oxidase
	mg/dl	185	161	209	12.00	24.00	
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	5718	4575	6861	571.50	1143.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC substrate start (DGKC) 37°C
	U/l	219	179	259	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	122	97.4	147	12.30	24.60	Randox Enzymatic UV method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	125	99.9	150	12.55	25.10	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	120	96.0	144	12.00	24.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.36	1.08	1.64	0.14	0.28	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	112	89.7	134	11.15	22.30	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.27	1.01	1.53	0.13	0.26	
	µmol/l	117	94.0	140	11.50	23.00	IDMS traceable
	mg/dl	1.32	1.06	1.58	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	58	50	66	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	7.07	6.01	8.13	0.53	1.06	Glucose dehydrogenase
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	7.06	6.00	8.12	0.53	1.06	Hexokinase
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	7.11	6.04	8.18	0.54	1.07	Glucose oxidase
	mg/dl	128	109	147	9.50	19.00	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL Immunoseparation
	mg/dl	59.1	50.2	68.0	4.45	8.90	
	mmol/l	1.45	1.24	1.66	0.11	0.21	Direct HDL PEGME
	mg/dl	56.0	47.9	64.1	4.05	8.10	
	mmol/l	1.58	1.34	1.82	0.12	0.24	Direct Clearance Method
	mg/dl	61.0	51.7	70.3	4.65	9.30	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	224	191	257	16.50	33.00	L->P 37°C
	U/l	505	429	581	38.00	76.00	P->L Scandinavian & Dutch 37°C
	U/l	463	393	533	35.00	70.00	P->L German methods 37°C
	U/l	225	191	259	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	39	31	47	4.00	8.00	Other Colorimetric 37°C
	U/l	40	32	48	4.00	8.00	Roche Colorimetric 37°C
	U/l	43	34	52	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.611	0.777	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.41	1.19	1.63	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.37	3.69	5.05	0.34	0.68	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.8	47.1	70.5	5.85	11.70	Biuret reaction end point
	g/dl	5.88	4.71	7.05	0.59	1.17	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.9	38.7	59.1	5.10	10.20	FE+UIBC(saturation with iron)
	µg/dl	273	216	330	28.50	57.00	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.8	116	8.10	16.20	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.15	0.96	1.34	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	102	85.3	119	8.35	16.70	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.92	6.36	0.36	0.72	
Urea	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease end point
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	7.28	6.19	8.37	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.28	6.19	8.37	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Purple
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	130	110	150	10.00	20.00	p-Nitrophenylphosphate AMP 37°C
	U/l	131	112	150	9.50	19.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
Amylase Pancreatic	U/l	56	47	65	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	58	49	67	4.50	9.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Beckman maltotetraose 37°C
	U/l	92	78	106	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Differential rate pH change
	mmol/l	14.2	11.3	17.1	1.45	2.90	Ion selective electrode
Bilirubin Direct	µmol/l	14.6	11.5	17.7	1.55	3.10	Diazo with Sulphanilic Acid
	mg/dl	0.854	0.673	1.04	0.09	0.18	
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.29	1.99	0.18	0.35	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.27	2.04	2.50	0.12	0.23	Ion selective electrode
	mg/dl	9.10	8.18	10.0	0.46	0.92	
	mmol/l	2.32	2.09	2.55	0.12	0.23	Arsenazo III
	mg/dl	9.30	8.38	10.2	0.46	0.92	
	mmol/l	2.30	2.07	2.53	0.12	0.23	NM-BAPTA
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Cholesterol	mmol/l	4.47	3.89	5.05	0.29	0.58	Cholesterol Oxidase
	mg/dl	173	150	196	11.50	23.00	
Chloride	mmol/l	98.8	90.9	107	3.95	7.90	ISE indirect
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	216	177	255	19.50	39.00	Monothioglycerol 37°C
Creatinine	µmol/l	120	95.7	144	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	119	95.5	143	11.75	23.50	Randox Enzymatic UV method
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	121	96.5	146	12.25	24.50	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	121	96.4	146	12.30	24.60	IDMS traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	48	41	55	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	6.86	5.83	7.89	0.52	1.03	Hexokinase
	mg/dl	124	105	143	9.50	19.00	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.95	5.91	7.99	0.52	1.04	Oxygen electrode
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	6.85	5.83	7.87	0.51	1.02	Glucose oxidase
	mg/dl	123	105	141	9.00	18.00	
HDL - Cholesterol	mmol/l	1.75	1.49	2.01	0.13	0.26	Direct HDL PPD
	mg/dl	67.6	57.5	77.7	5.05	10.10	
Iron	µmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.2	120	9.40	18.80	
Lactate	mmol/l	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	
LD (LDH)	U/l	189	160	218	14.50	29.00	L->P 37°C
	U/l	586	498	674	44.00	88.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.93	0.82	1.05	0.06	0.11	Calmagite
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Osmolality	mOsm/kg	285	228	342	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction CX4/5/7
	g/dl	5.89	4.71	7.07	0.59	1.18	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
	g/l	56.7	45.4	68.0	5.65	11.30	Biuret reaction kinetic
	g/dl	5.67	4.54	6.80	0.57	1.13	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	49.7	39.2	60.2	5.25	10.50	Removal of excess free iron
	µg/dl	278	219	337	29.50	59.00	
	µmol/l	48.0	37.9	58.1	5.05	10.10	FE+UIBC(saturation with iron)
	µg/dl	268	212	324	28.00	56.00	
Triglycerides	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	103	86.6	119	8.20	16.40	
	mmol/l	1.19	1.00	1.38	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	105	88.1	122	8.45	16.90	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.41	4.70	6.12	0.36	0.71	
Urea	mmol/l	7.42	6.31	8.53	0.56	1.11	Urease end point
	mg/dl	44.6	37.9	51.3	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Green
	g/dl	3.93	3.34	4.52	0.30	0.59	
Alkaline Phosphatase	U/l	131	112	150	9.50	19.00	AMP optimised to IFCC 37°C
	U/l	102	87	117	7.50	15.00	AMP optimised to IFCC 30°C
	U/l	84	72	96	6.00	12.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
Cholesterol	mmol/l	4.91	4.28	5.54	0.32	0.63	Cholesterol Oxidase
	mg/dl	190	165	215	12.50	25.00	
Creatinine	µmol/l	120	95.6	144	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
Glucose	mmol/l	7.30	6.21	8.39	0.55	1.09	Glucose oxidase
	mg/dl	132	112	152	10.00	20.00	
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
Triglycerides	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	79.1	109	7.35	14.70	
Uric Acid (Urate)	mmol/l	0.38	0.33	0.43	0.03	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.38	5.54	7.22	0.42	0.84	
Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.8	52.6	3.45	6.90	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.0	33.1	44.9	2.95	5.90	Bromocresol Green
	g/dl	3.90	3.31	4.49	0.30	0.59	
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
	U/l	32	25	39	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	23	33	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	35.8	28.2	43.4	3.80	7.60	Diazo with Sulphanilic Acid
	mg/dl	2.09	1.65	2.53	0.22	0.44	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Cholesterol	mmol/l	4.92	4.28	5.56	0.32	0.64	Cholesterol Oxidase
	mg/dl	190	165	215	12.50	25.00	
CK Total	U/l	231	189	273	21.00	42.00	CK-NAC (IFCC) 37°C
	U/l	145	118	172	13.50	27.00	CK-NAC (IFCC) 30°C
	U/l	98	80	116	9.00	18.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	119	94.9	143	12.05	24.10	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
Glucose	mmol/l	7.39	6.28	8.50	0.56	1.11	Glucose oxidase
	mg/dl	133	113	153	10.00	20.00	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction end point
	g/dl	5.94	4.75	7.13	0.60	1.19	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
Uric Acid (Urate)	mmol/l	0.37	0.33	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.27	5.46	7.08	0.41	0.81	
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.18	5.39	6.97	0.40	0.79	
Urea	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Purple
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	38.5	32.7	44.3	2.90	5.80	Turbidimetric Assays
	g/dl	3.85	3.27	4.43	0.29	0.58	
Alkaline Phosphatase	U/l	105	89	121	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	82	69	95	6.50	13.00	Roche Integra AMP buffer 30°C
	U/l	67	57	77	5.00	10.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	19.8	15.6	24.0	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.16	0.913	1.41	0.12	0.25	

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Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	20.1	15.8	24.4	2.15	4.30	Roche JG factored
	mg/dl	1.18	0.924	1.44	0.13	0.26	
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.22	8.30	10.1	0.46	0.92	
	mmol/l	2.28	2.05	2.51	0.12	0.23	NM-BAPTA
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Cholesterol	mmol/l	4.86	4.23	5.49	0.32	0.63	Cholesterol Oxidase
	mg/dl	188	163	213	12.50	25.00	
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	ISE indirect
Cholinesterase	U/l	5732	4585	6879	573.50	1147.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	218	179	257	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	136	112	160	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	93	76	110	8.50	17.00	CK-NAC substrate start (DGKC) 25°C
	U/l	224	183	265	20.50	41.00	CK-NAC (IFCC) 37°C
	U/l	140	115	165	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	95	78	112	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	118	94.1	142	11.95	23.90	Alkaline picrate with deproteinization
	mg/dl	1.33	1.06	1.60	0.14	0.27	
	µmol/l	114	91.4	137	11.30	22.60	Alkaline picrate no deproteinization
	mg/dl	1.29	1.03	1.55	0.13	0.26	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	119	95.4	143	11.80	23.60	Randox Enzymatic UV method
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	119	94.8	143	12.10	24.20	Roche Creatinine Plus
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	114	91.0	137	11.50	23.00	Jaffe rate blanked
	mg/dl	1.29	1.03	1.55	0.13	0.26	
	µmol/l	119	94.9	143	12.05	24.10	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	117	93.4	141	11.80	23.60	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.21	6.13	8.29	0.54	1.08	Glucose dehydrogenase
	mg/dl	130	110	150	10.00	20.00	
	mmol/l	7.08	6.02	8.14	0.53	1.06	Hexokinase
	mg/dl	128	108	148	10.00	20.00	
	mmol/l	7.20	6.12	8.28	0.54	1.08	Glucose oxidase
	mg/dl	130	110	150	10.00	20.00	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL PEGME
	mg/dl	59.1	50.2	68.0	4.45	8.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct HDL Roche 3rd generation
	mg/dl	58.3	49.4	67.2	4.45	8.90	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric with ppt.
	µg/dl	108	88.3	128	9.85	19.70	
	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.65	1.35	1.95	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.9	12.2	17.6	1.35	2.70	
LD (LDH)	U/l	445	378	512	33.50	67.00	P->L German methods 37°C
	U/l	321	273	369	24.00	48.00	P->L German methods 30°C
	U/l	226	192	260	17.00	34.00	P->L German methods 25°C
	U/l	240	204	276	18.00	36.00	L->P IFCC 37°C
	U/l	173	147	199	13.00	26.00	L->P IFCC 30°C
	U/l	122	103	141	9.50	19.00	L->P IFCC 25°C
Lipase	U/l	42	33	51	4.50	9.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.615	0.787	0.04	0.09	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.50	3.81	5.19	0.35	0.69	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction end point
	g/dl	5.76	4.61	6.91	0.58	1.15	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	267	211	323	28.00	56.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.09	0.92	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.2	112	7.65	15.30	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
Urea	mmol/l	7.56	6.43	8.69	0.57	1.13	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	6.91	5.87	7.95	0.52	1.04	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	

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Dirui CS-400/800

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.5	35.3	47.7	3.10	6.20	Bromocresol Green
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	106	90	122	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	87	74	100	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Calcium	mmol/l	2.34	2.11	2.57	0.12	0.23	Arsenazo III
	mg/dl	9.38	8.46	10.3	0.46	0.92	
Cholesterol	mmol/l	4.69	4.08	5.30	0.31	0.61	Cholesterol Oxidase
	mg/dl	181	157	205	12.00	24.00	
Creatinine	µmol/l	123	98.3	148	12.35	24.70	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	38	50	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	7.23	6.14	8.32	0.55	1.09	Glucose oxidase
	mg/dl	130	111	149	9.50	19.00	
HDL - Cholesterol	mmol/l	1.37	1.16	1.58	0.11	0.21	Direct Clearance Method
	mg/dl	52.9	44.8	61.0	4.05	8.10	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.43	3.75	5.11	0.34	0.68	
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
Urea	mmol/l	7.18	6.10	8.26	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.18	6.10	8.26	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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ELITech/Vitalab Selectra Pro/E/XL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	206	175	237	15.50	31.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	29.5	23.3	35.7	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.73	1.36	2.10	0.19	0.37	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.14	8.22	10.1	0.46	0.92	
	mmol/l	2.28	2.05	2.51	0.12	0.23	Arsenazo III
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Cholesterol	mmol/l	4.78	4.16	5.40	0.31	0.62	Cholesterol Oxidase
	mg/dl	185	161	209	12.00	24.00	
Creatinine	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
Glucose	mmol/l	7.02	5.96	8.08	0.53	1.06	Glucose oxidase
	mg/dl	127	107	147	10.00	20.00	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.65	3.94	5.36	0.36	0.71	
Protein Total	g/l	63.9	51.1	76.7	6.40	12.80	Biuret reaction end point
	g/dl	6.39	5.11	7.67	0.64	1.28	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
Urea	mmol/l	7.34	6.24	8.44	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mmol/l	7.34	6.24	8.44	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Purple
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 37°C
	U/l	79	67	91	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	65	55	75	5.00	10.00	Roche Integra AMP buffer 25°C
	U/l	134	114	154	10.00	20.00	Randox AMP 37°C
	U/l	104	89	119	7.50	15.00	Randox AMP 30°C
	U/l	86	73	99	6.50	13.00	Randox AMP 25°C
ALT (GPT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	16	26	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Randox liquid stable pNPG7 37°C
Acid Phosphatase (non-prostatic)	U/l	6.42	4.30	8.54	1.06	2.12	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	5.06	3.39	6.73	0.84	1.67	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	15.3	10.3	20.3	2.50	5.00	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
	U/l	8.78	5.88	11.7	1.45	2.90	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	20.4	13.7	27.1	3.35	6.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (Total)	U/l	15.2	10.2	20.2	2.50	5.00	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.5	19.6	29.4	2.45	4.90	5th Generation Colorimetric
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Colorimetric
	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	19.4	15.3	23.5	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.13	0.895	1.37	0.12	0.24	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Oxidation to Biliverdin
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	25.5	20.2	30.8	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	28.1	22.2	34.0	2.95	5.90	Oxidation to Biliverdin
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Arsenazo III
	mg/dl	9.22	8.30	10.1	0.46	0.92	
	mmol/l	2.31	2.08	2.54	0.12	0.23	NM-BAPTA
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.78	4.16	5.40	0.31	0.62	Cholesterol Oxidase
	mg/dl	185	161	209	12.00	24.00	
Chloride	mmol/l	95.2	87.6	103	3.80	7.60	ISE indirect
Cholinesterase	U/l	5848	4679	7017	584.50	1169.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	208	170	246	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	212	174	250	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	133	109	157	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.6	147	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	124	99.5	149	12.25	24.50	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.24	0.21	0.28	0.02	0.04	Tris buffer 100mmol pH 8.5

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	25	20	30	2.50	5.00	Triethanolamine buffer 50 mmol 37°C
	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 30°C
	U/l	16	12	20	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	7.01	5.96	8.06	0.53	1.05	Hexokinase
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	7.26	6.17	8.35	0.55	1.09	Glucose oxidase
	mg/dl	131	111	151	10.00	20.00	
alpha-HBDH	U/l	249	197	301	26.00	52.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	188	149	227	19.50	39.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	141	112	170	14.50	29.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.56	1.33	1.79	0.12	0.23	Direct HDL Immunoseparation
	mg/dl	60.2	51.3	69.1	4.45	8.90	
	mmol/l	1.56	1.33	1.79	0.12	0.23	Direct HDL PEGME
	mg/dl	60.2	51.3	69.1	4.45	8.90	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method
	mg/dl	51.0	43.2	58.8	3.90	7.80	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	57.1	48.6	65.6	4.25	8.50	
Iron	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
Lactate	mmol/l	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	
LD (LDH)	U/l	450	382	518	34.00	68.00	P->L German methods 37°C
	U/l	325	276	374	24.50	49.00	P->L German methods 30°C
	U/l	228	194	262	17.00	34.00	P->L German methods 25°C
	U/l	223	190	256	16.50	33.00	L->P IFCC 37°C
	U/l	161	137	185	12.00	24.00	L->P IFCC 30°C
	U/l	113	96	130	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	42	34	50	4.00	8.00	Other Colorimetric 37°C
	U/l	39	31	47	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.631	0.799	0.04	0.08	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.90	0.79	1.00	0.05	0.11	Enzymatic
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Osmolality	mOsm/kg	299	239	359	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.1	36.4	55.8	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	258	203	313	27.50	55.00	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	1.08	0.91	1.26	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	95.6	80.1	111	7.75	15.50	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.87	6.35	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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RANDOX

ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	110	93	127	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	90	77	103	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	24.7	19.7	29.7	2.50	5.00	Enzymatic Colorimetric
Bilirubin Total	µmol/l	29.3	23.2	35.4	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.36	2.06	0.18	0.35	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Cholesterol	mmol/l	4.68	4.07	5.29	0.31	0.61	Cholesterol Oxidase
	mg/dl	181	157	205	12.00	24.00	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE indirect
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	125	99.8	150	12.60	25.20	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.27	0.23	0.31	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	35	45	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.17	6.09	8.25	0.54	1.08	Hexokinase
	mg/dl	129	110	148	9.50	19.00	
	mmol/l	7.03	5.97	8.09	0.53	1.06	Glucose oxidase
	mg/dl	127	108	146	9.50	19.00	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
LD (LDH)	U/l	453	385	521	34.00	68.00	P->L German methods 37°C
	U/l	327	278	376	24.50	49.00	P->L German methods 30°C
	U/l	230	195	265	17.50	35.00	P->L German methods 25°C
Magnesium	mmol/l	0.96	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
	mmol/l	0.98	0.86	1.10	0.06	0.12	Enzymatic
	mg/dl	2.37	2.09	2.65	0.14	0.28	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	

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ILab 600®/650®/Aries®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.12	3.79	4.45	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.7	48.5	72.9	6.10	12.20	Biuret reaction end point
	g/dl	6.07	4.85	7.29	0.61	1.22	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.02	6.50	0.37	0.74	
Urea	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease end point
	mg/dl	44.7	37.9	51.5	3.40	6.80	
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	40.7	34.6	46.8	3.05	6.10	Vitros DT60/DT60 II/DTSC II
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	108	92	124	8.00	16.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	64	55	73	4.50	9.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.6	12.4	18.8	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	23.6	18.6	28.6	2.50	5.00	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.38	1.09	1.67	0.15	0.29	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.38	2.14	2.62	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.54	8.58	10.5	0.48	0.96	
	mmol/l	2.37	2.13	2.61	0.12	0.24	Vitros DT60/DT60 II/DTSC II
	mg/dl	9.50	8.54	10.5	0.48	0.96	
Cholesterol	mmol/l	4.48	3.90	5.06	0.29	0.58	Ortho Vitros Microslide Systems
	mg/dl	173	151	195	11.00	22.00	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	Ortho Vitros Microslide Systems
	mmol/l	98.8	90.9	107	3.95	7.90	Vitros DT60/DT60 II/DTE II

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholinesterase	U/l	5846	4677	7015	584.50	1169.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	195	160	230	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	188	154	222	17.00	34.00	Vitros DT60/DT60 II/DTSC II 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	125	99.8	150	12.60	25.20	Vitros IDMS Traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
Free T4	pmol/l	33.5	25.1	41.9	4.20	8.40	Vitros ECi
	ng/dl	2.61	1.96	3.26	0.33	0.65	
	pg/ml	26.1	19.6	32.6	3.25	6.50	Vitros ECi
gamma-GT	U/l	71	60	82	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	74	63	85	5.50	11.00	Vitros DT60/DT60 II/DTSC II 37°C
Glucose	mmol/l	6.80	5.78	7.82	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	6.82	5.80	7.84	0.51	1.02	Vitros DT60/DT60 II
	mg/dl	123	105	141	9.00	18.00	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Vitros Magnetic HDL
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Vitros 5.1 FS microtip assay
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	57.5	49.0	66.0	4.25	8.50	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.53	1.25	1.81	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	13.8	11.3	16.3	1.25	2.50	

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	656	557	755	49.50	99.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	291	233	349	29.00	58.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.23	1.09	1.37	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.854	0.757	0.951	0.05	0.10	
Magnesium	mmol/l	0.92	0.81	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Vitros DT60/DT60 II
	mg/dl	2.13	1.88	2.38	0.13	0.25	
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.68	3.97	5.39	0.36	0.71	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.03	3.70	4.36	0.17	0.33	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.91	4.73	7.09	0.59	1.18	
	g/l	60.0	48.0	72.0	6.00	12.00	Vitros DT60/DT60 II
	g/dl	6.00	4.80	7.20	0.60	1.20	
PSA Total	ng/ml =	17.8	13.4	22.2	2.20	4.40	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	143	135	151	4.00	8.00	Vitros DT60/DT60 II/DTE II
Thyroid Stimulating Hormone	µU/ml =	1.48	1.18	1.78	0.15	0.30	Vitros ECi
TIBC	µmol/l	50.8	40.2	61.4	5.30	10.60	Ortho Vitros Microslide Systems
	µg/dl	284	225	343	29.50	59.00	
Total T3	nmol/l	4.21	3.15	5.27	0.53	1.06	Vitros ECi
	ng/ml	2.74	2.05	3.43	0.35	0.69	
	ng/dl	274	205	343	34.50	69.00	Vitros ECi

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JOHNSON AND JOHNSON VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.28	1.07	1.49	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	113	94.7	131	9.15	18.30	
	mmol/l	1.24	1.04	1.44	0.10	0.20	Vitros DT60/DT60 II
	mg/dl	110	92.0	128	9.00	18.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.49	4.79	6.19	0.35	0.70	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Vitros DT60/DT60 II
	mg/dl	5.66	4.92	6.40	0.37	0.74	
Urea	mmol/l	6.86	5.83	7.89	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	6.96	5.92	8.00	0.52	1.04	Vitros DT60/DT60 II
	mg/dl	41.8	35.6	48.0	3.10	6.20	
	mmol/l	6.86	5.83	7.89	0.52	1.03	BUN
	mg/dl	19.3	16.4	22.2	1.45	2.90	

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Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.2	33.3	45.1	2.95	5.90	Bromocresol Green
	g/dl	3.92	3.33	4.51	0.30	0.59	
Alkaline Phosphatase	U/l	219	186	252	16.50	33.00	Diethanolamine buffer DEA 37°C
	U/l	171	145	197	13.00	26.00	Diethanolamine buffer DEA 30°C
	U/l	140	119	161	10.50	21.00	Diethanolamine buffer DEA 25°C
	U/l	130	110	150	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	101	86	116	7.50	15.00	AMP optimised to IFCC 30°C
	U/l	83	70	96	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	79	67	91	6.00	12.00	bioMerieux 2-chloro-pNPG3 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	28.3	22.6	34.0	2.85	5.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.2	14.4	22.0	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.842	1.28	0.11	0.22	
Bilirubin Total	µmol/l	24.4	19.3	29.5	2.55	5.10	Nitrobenzenediazonium salt
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	2.33	2.10	2.56	0.12	0.23	Arsenazo III
	mg/dl	9.34	8.42	10.3	0.46	0.92	

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RANDOX

Konelab 20/30/60®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.65	4.04	5.26	0.31	0.61	Cholesterol Oxidase
	mg/dl	179	156	202	11.50	23.00	
Chloride	mmol/l	102	93.6	110	4.20	8.40	ISE direct
CK Total	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	140	115	165	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	95	78	112	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.0	149	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.4	149	12.30	24.60	Randox Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	120	95.9	144	12.05	24.10	Jaffe rate blanked
	mg/dl	1.36	1.08	1.64	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.23	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.28	6.18	8.38	0.55	1.10	Hexokinase
	mg/dl	131	111	151	10.00	20.00	
	mmol/l	7.18	6.10	8.26	0.54	1.08	Glucose oxidase
	mg/dl	129	110	148	9.50	19.00	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL PEGME
	mg/dl	56.0	47.5	64.5	4.25	8.50	
Iron	µmol/l	22.1	18.1	26.1	2.00	4.00	Colorimetric without ppt.
	µg/dl	124	101	147	11.50	23.00	
LD (LDH)	U/l	225	191	259	17.00	34.00	L->P IFCC 37°C
	U/l	162	138	186	12.00	24.00	L->P IFCC 30°C
	U/l	114	97	131	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	1.00	0.88	1.12	0.06	0.12	Calmagite
	mg/dl	2.43	2.15	2.71	0.14	0.28	
	mmol/l	0.91	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - direct
Protein Total	g/l	60.9	48.7	73.1	6.10	12.20	Biuret reaction end point
	g/dl	6.09	4.87	7.31	0.61	1.22	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Urease kinetic
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.1	47.3	3.05	6.10	Bromocresol Green
	g/dl	4.12	3.51	4.73	0.31	0.61	
	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Purple
	g/dl	4.18	3.55	4.81	0.32	0.63	
	g/l	40.1	34.1	46.1	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.01	3.41	4.61	0.30	0.60	
	g/l	39.1	33.3	44.9	2.90	5.80	Turbidimetric Assays
	g/dl	3.91	3.33	4.49	0.29	0.58	
Alkaline Phosphatase	U/l	130	110	150	10.00	20.00	p-Nitrophenylphosphate AMP 37°C
	U/l	101	86	116	7.50	15.00	p-Nitrophenylphosphate AMP 30°C
	U/l	83	70	96	6.50	13.00	p-Nitrophenylphosphate AMP 25°C
	U/l	108	92	124	8.00	16.00	Ortho Vitros Microslide Systems 37°C
	U/l	215	183	247	16.00	32.00	Diethanolamine buffer DEA 37°C
	U/l	167	143	191	12.00	24.00	Diethanolamine buffer DEA 30°C
	U/l	137	117	157	10.00	20.00	Diethanolamine buffer DEA 25°C
	U/l	133	113	153	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	104	88	120	8.00	16.00	AMP optimised to IFCC 30°C
	U/l	85	72	98	6.50	13.00	AMP optimised to IFCC 25°C
	U/l	125	106	144	9.50	19.00	AMP reduced interference 37°C
	U/l	97	83	111	7.00	14.00	AMP reduced interference 30°C
	U/l	80	68	92	6.00	12.00	AMP reduced interference 25°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	45	36	54	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	61	52	70	4.50	9.00	Immunoinhibition EPS substrate 37°C
	U/l	66	56	76	5.00	10.00	Roche liquid stable pNPG7 37°C
	U/l	76	65	87	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	88	74	102	7.00	14.00	pNP Maltotrioside substrates 37°C
	U/l	88	75	101	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Biotrol - blocked pNPG7 37°C
	U/l	88	75	101	6.50	13.00	I.L. - blocked pNPG7 37°C
	U/l	72	61	83	5.50	11.00	Randox - Ethylidene pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Randox liquid stable pNPG7 37°C
	U/l	88	74	102	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Beckman maltotetraose 37°C
	U/l	94	80	108	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	64	55	73	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	88	74	102	7.00	14.00	Other Roche 2-chloro-pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	81	68	94	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	85	72	98	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Synchron AMY7 37°C
Apolipoprotein A-1	g/l	1.07	0.88	1.26	0.10	0.19	Immunoturbidimetric
	mg/dl	107	87.7	126	9.65	19.30	
Apolipoprotein B	g/l	0.62	0.51	0.73	0.06	0.11	Immunoturbidimetric
	mg/dl	61.8	50.7	72.9	5.55	11.10	
Acid Phosphatase (non-prostatic)	U/l	6.42	4.30	8.54	1.06	2.12	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	5.06	3.39	6.73	0.84	1.67	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Prostatic)	U/l	8.78	5.88	11.7	1.45	2.90	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	15.3	10.3	20.3	2.50	5.00	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
Acid Phosphatase (Total)	U/l	15.2	10.2	20.2	2.50	5.00	1-Naphthyl Phosphate substrate Kinetic 37°C
	U/l	20.4	13.7	27.1	3.35	6.70	1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C
AST (GOT)	U/l	50	40	60	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	48	38	58	5.00	10.00	Tris buffer with P5P 37°C
	U/l	32	26	38	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer with P5P 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer SCE 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer SCE 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	28.5	22.8	34.2	2.85	5.70	4th Generation Colorimetric
	µmol/l	24.5	19.6	29.4	2.45	4.90	5th Generation Colorimetric
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Colorimetric
	mmol/l	15.6	12.4	18.8	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	14.5	11.5	17.5	1.50	3.00	Differential rate pH change
	mmol/l	14.6	11.6	17.6	1.50	3.00	Enzymatic
	mmol/l	14.1	11.1	17.1	1.50	3.00	Ion selective electrode
Bilirubin Direct	µmol/l	20.3	16.0	24.6	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.19	0.936	1.44	0.13	0.25	
	µmol/l	20.4	16.1	24.7	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.942	1.44	0.12	0.25	
	µmol/l	19.5	15.4	23.6	2.05	4.10	Roche JG factored
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	19.3	15.2	23.4	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.889	1.37	0.12	0.24	
	µmol/l	17.3	13.7	20.9	1.80	3.60	Oxidation to Biliverdin
	mg/dl	1.01	0.801	1.22	0.10	0.21	
	µmol/l	18.3	14.5	22.1	1.90	3.80	Modified Jendrassik
	mg/dl	1.07	0.848	1.29	0.11	0.22	
Bilirubin Total	µmol/l	23.6	18.6	28.6	2.50	5.00	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.38	1.09	1.67	0.15	0.29	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	36.2	28.6	43.8	3.80	7.60	Diazo with Dichloroaniline (DCA)
	mg/dl	2.12	1.67	2.57	0.23	0.45	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	28.3	22.4	34.2	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Nitrobenzenediazonium salt
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Oxidation to Biliverdin
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	µmol/l	35.0	27.7	42.3	3.65	7.30	Modified Jendrassik
	mg/dl	2.05	1.62	2.48	0.22	0.43	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.38	2.14	2.62	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	9.54	8.58	10.5	0.48	0.96	
	mmol/l	2.27	2.04	2.50	0.12	0.23	Ion selective electrode
	mg/dl	9.10	8.18	10.0	0.46	0.92	
	mmol/l	2.33	2.10	2.56	0.12	0.23	Methylthymol blue
	mg/dl	9.34	8.42	10.3	0.46	0.92	
	mmol/l	2.33	2.09	2.57	0.12	0.24	Arsenazo III
	mg/dl	9.34	8.38	10.3	0.48	0.96	
	mmol/l	2.31	2.08	2.54	0.12	0.23	NM-BAPTA
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Cholesterol	mmol/l	4.48	3.90	5.06	0.29	0.58	Ortho Vitros Microslide Systems
	mg/dl	173	151	195	11.00	22.00	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.74	4.12	5.36	0.31	0.62	Cholesterol Oxidase
	mg/dl	183	159	207	12.00	24.00	
	mmol/l	4.79	4.16	5.42	0.32	0.63	Agappe - CHOD-PAP
	mg/dl	185	161	209	12.00	24.00	
Chloride	mmol/l	99.9	91.9	108	4.00	8.00	Colorimetric
	mmol/l	98.7	90.8	107	3.95	7.90	Ortho Vitros Microslide Systems
	mmol/l	96.6	88.9	104	3.85	7.70	ISE indirect
	mmol/l	99.1	91.2	107	3.95	7.90	ISE direct
Cholinesterase	U/l	5938	4750	7126	594.00	1188.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	195	160	230	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	215	176	254	19.50	39.00	CK-NAC serum start (DGKC) 37°C
	U/l	135	110	160	12.50	25.00	CK-NAC serum start (DGKC) 30°C
	U/l	91	75	107	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	218	179	257	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	136	112	160	12.00	24.00	CK-NAC substrate start (DGKC) 30°C
	U/l	93	76	110	8.50	17.00	CK-NAC substrate start (DGKC) 25°C
	U/l	218	179	257	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	136	112	160	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	93	76	110	8.50	17.00	CK-NAC (IFCC) 25°C
	U/l	216	177	255	19.50	39.00	Monothioglycerol 37°C
	U/l	135	111	159	12.00	24.00	Monothioglycerol 30°C
	U/l	92	75	109	8.50	17.00	Monothioglycerol 25°C
	U/l	204	168	240	18.00	36.00	Dithioerythritol 37°C
	U/l	128	105	151	11.50	23.00	Dithioerythritol 30°C
	U/l	87	71	103	8.00	16.00	Dithioerythritol 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	200	164	236	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	125	103	147	11.00	22.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	85	70	100	7.50	15.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	16.8	13.5	20.1	1.65	3.30	Atomic absorption
	µg/dl	107	85.9	128	10.55	21.10	
	µmol/l	16.7	13.4	20.0	1.65	3.30	Colorimetric
	µg/dl	106	85.2	127	10.40	20.80	
Cortisol	nmol/l	486	365	607	60.50	121.00	Roche Cobas E411
	µg/dl	17.5	13.1	21.9	2.20	4.40	
Creatinine	µmol/l	119	95.1	143	11.95	23.90	Alkaline picrate with deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	121	96.7	145	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	125	99.9	150	12.55	25.10	Roche Creatinine Plus
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	98.8	149	12.60	25.20	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	117	93.5	141	11.75	23.50	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	125	99.8	150	12.60	25.20	Vitros IDMS Traceable
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	120	96.0	144	12.00	24.00	IDMS traceable
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	117	93.6	140	11.70	23.40	Agappe - Jaffe Kinetic
	mg/dl	1.32	1.06	1.58	0.13	0.26	
	µmol/l	117	93.7	140	11.65	23.30	Agappe - Enzymatic
	mg/dl	1.32	1.06	1.58	0.13	0.26	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.02	1.62	2.42	0.20	0.40	Immunoturbidimetric
	ng/ml	1.58	1.27	1.89	0.16	0.31	
Folate	nmol/l	36.3	27.6	45.0	4.35	8.70	Roche Cobas E411
	ng/ml	16.0	12.2	19.8	1.90	3.80	
Free T4	pmol/l	17.2	12.9	21.5	2.15	4.30	Abbott Architect
	ng/dl	1.34	1.01	1.67	0.17	0.33	
	pg/ml	13.4	10.1	16.7	1.65	3.30	Abbott Architect
	pmol/l	17.3	12.9	21.7	2.20	4.40	Siemens Centaur XP/Classic
	ng/dl	1.35	1.01	1.69	0.17	0.34	
	pg/ml	13.5	10.1	16.9	1.70	3.40	Siemens Centaur XP/Classic
	pmol/l	18.0	13.5	22.5	2.25	4.50	Beckman Access
	ng/dl	1.40	1.05	1.75	0.18	0.35	
	pg/ml	14.0	10.5	17.5	1.75	3.50	Beckman Access
	pmol/l	18.9	14.2	23.6	2.35	4.70	BioMerieux Vidas
	ng/dl	1.47	1.11	1.83	0.18	0.36	
	pg/ml	14.7	11.1	18.3	1.80	3.60	BioMerieux Vidas

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	21.3	16.0	26.6	2.65	5.30	Siemens Immulite 1000
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Siemens Immulite 1000
	pmol/l	33.5	25.1	41.9	4.20	8.40	Vitros ECi
	ng/dl	2.61	1.96	3.26	0.33	0.65	
	pg/ml	26.1	19.6	32.6	3.25	6.50	Vitros ECi
	pmol/l	21.1	15.8	26.4	2.65	5.30	Roche Elecsys
	ng/dl	1.65	1.23	2.07	0.21	0.42	
	pg/ml	16.5	12.3	20.7	2.10	4.20	Roche Elecsys
	pmol/l	21.4	16.1	26.7	2.65	5.30	Roche Modular E170
	ng/dl	1.67	1.26	2.08	0.21	0.41	
	pg/ml	16.7	12.6	20.8	2.05	4.10	Roche Modular E170
	pmol/l	21.4	16.0	26.8	2.70	5.40	Tosoh AIA360
	ng/dl	1.67	1.25	2.09	0.21	0.42	
	pg/ml	16.7	12.5	20.9	2.10	4.20	Tosoh AIA360
	pmol/l	21.6	16.2	27.0	2.70	5.40	Roche Cobas E411
	ng/dl	1.68	1.26	2.10	0.21	0.42	
	pg/ml	16.8	12.6	21.0	2.10	4.20	Roche Cobas E411
	pmol/l	21.0	15.7	26.3	2.65	5.30	Roche Cobas 6000/8000
	ng/dl	1.64	1.22	2.06	0.21	0.42	
	pg/ml	16.4	12.2	20.6	2.10	4.20	Roche Cobas 6000/8000
Gentamicin	µmol/l	7.30	5.84	8.76	0.73	1.46	Immunoturbidimetric
	µg/ml	3.49	2.79	4.19	0.35	0.70	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	71	60	82	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	48	41	55	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	57	49	65	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	45	39	51	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	50	42	58	4.00	8.00	Agappe - Szasz Kinetic 37°C
	U/l	39	33	45	3.00	6.00	Agappe - Szasz Kinetic 30°C
	U/l	31	26	36	2.50	5.00	Agappe - Szasz Kinetic 25°C
	U/l	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.80	5.78	7.82	0.51	1.02	Ortho Vitros Microslide Systems
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	7.09	6.03	8.15	0.53	1.06	Glucose dehydrogenase
	mg/dl	128	109	147	9.50	19.00	
	mmol/l	7.05	5.99	8.11	0.53	1.06	Hexokinase
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	6.91	5.87	7.95	0.52	1.04	Oxygen electrode
	mg/dl	125	106	144	9.50	19.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	7.03	5.98	8.08	0.53	1.05	Glucose oxidase
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	6.89	5.86	7.92	0.52	1.03	Agappe - GOD-PAP
	mg/dl	124	106	142	9.00	18.00	
alpha-HBDH	U/l	278	220	336	29.00	58.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	210	166	254	22.00	44.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	157	125	189	16.00	32.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.68	1.43	1.93	0.13	0.25	Direct HDL PPD
	mg/dl	64.8	55.2	74.4	4.80	9.60	
	mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	57.9	49.4	66.4	4.25	8.50	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Vitros Magnetic HDL
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct HDL PEGME
	mg/dl	58.7	49.8	67.6	4.45	8.90	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Direct Clearance Method
	mg/dl	57.5	49.0	66.0	4.25	8.50	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Vitros 5.1 FS microtip assay
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	57.5	49.0	66.0	4.25	8.50	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	57.1	48.6	65.6	4.25	8.50	
	mmol/l	1.57	1.34	1.80	0.12	0.23	HDL - Ultra
	mg/dl	60.6	51.7	69.5	4.45	8.90	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Immunoglobulin A	g/l	1.87	1.40	2.33	0.23	0.47	Immunoturbidimetric
	mg/dl	187	140	234	23.50	47.00	
Immunoglobulin G	g/l	6.88	5.64	8.12	0.62	1.24	Immunoturbidimetric
	mg/dl	688	564	812	62.00	124.00	
Immunoglobulin M	g/l	0.65	0.52	0.78	0.07	0.13	Immunoturbidimetric
	mg/dl	64.8	51.8	77.8	6.50	13.00	
Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	
	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Ortho Vitros Microslide Systems
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.52	1.24	1.80	0.14	0.28	Ion selective electrode
	mg/dl	13.7	11.2	16.2	1.25	2.50	
	mmol/l	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	
	mmol/l	1.53	1.25	1.81	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	13.8	11.3	16.3	1.25	2.50	
	mmol/l	1.47	1.20	1.74	0.14	0.27	UV LDH
	mg/dl	13.2	10.8	15.6	1.20	2.40	
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	656	557	755	49.50	99.00	Ortho Vitros Microslide Systems 37°C
	U/l	202	172	232	15.00	30.00	L->P 37°C
	U/l	146	124	168	11.00	22.00	L->P 30°C
	U/l	102	87	117	7.50	15.00	L->P 25°C

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	498	423	573	37.50	75.00	P->L Scandinavian & Dutch 37°C
	U/l	360	305	415	27.50	55.00	P->L Scandinavian & Dutch 30°C
	U/l	252	214	290	19.00	38.00	P->L Scandinavian & Dutch 25°C
	U/l	450	382	518	34.00	68.00	P->L German methods 37°C
	U/l	325	276	374	24.50	49.00	P->L German methods 30°C
	U/l	228	194	262	17.00	34.00	P->L German methods 25°C
	U/l	457	389	525	34.00	68.00	P->L SFBC 37°C
	U/l	330	281	379	24.50	49.00	P->L SFBC 30°C
	U/l	232	197	267	17.50	35.00	P->L SFBC 25°C
	U/l	227	193	261	17.00	34.00	L->P IFCC 37°C
	U/l	164	139	189	12.50	25.00	L->P IFCC 30°C
	U/l	115	98	132	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
	U/l	291	233	349	29.00	58.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	32	48	4.00	8.00	Roche Colorimetric 37°C
	U/l	184	148	220	18.00	36.00	Randox Turbidimetric with colipase 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.11	0.06	0.12	Atomic absorption
	mg/dl	0.691	0.608	0.774	0.04	0.08	
	mmol/l	1.23	1.09	1.37	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.854	0.757	0.951	0.05	0.10	
	mmol/l	1.04	0.91	1.17	0.06	0.13	Flame photometry
	mg/dl	0.722	0.633	0.811	0.04	0.09	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Ion selective electrode
	mg/dl	0.708	0.626	0.790	0.04	0.08	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.631	0.799	0.04	0.08	
	mmol/l	1.04	0.92	1.17	0.06	0.13	Randox Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Arsenazo III
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.92	0.81	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.93	0.82	1.05	0.06	0.11	Calmagite
	mg/dl	2.27	2.00	2.54	0.14	0.27	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Enzymatic
	mg/dl	2.19	1.93	2.45	0.13	0.26	
NEFA	mmol/l	1.46	1.24	1.68	0.11	0.22	Colorimetric
Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
	mOsm/kg	308	246	370	31.00	62.00	Freezing point depression
	mOsm/kg	314	251	377	31.50	63.00	Vapour pressure
Paracetamol	mmol/l	0.07	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.0	8.78	13.2	1.11	2.22	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.51	1.28	1.74	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.68	3.97	5.39	0.36	0.71	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.43	3.75	5.11	0.34	0.68	
	mmol/l	1.41	1.19	1.63	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.37	3.69	5.05	0.34	0.68	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	4.15	3.82	4.48	0.17	0.33	Enzymatic
	mmol/l	3.97	3.65	4.29	0.16	0.32	Flame photometry
	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - direct
	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.91	4.73	7.09	0.59	1.18	
	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction kinetic
	g/dl	5.76	4.61	6.91	0.58	1.15	
	g/l	58.9	47.1	70.7	5.90	11.80	Agappe - Biuret
	g/dl	5.89	4.71	7.07	0.59	1.18	
PSA Total	ng/ml =	12.1	9.06	15.1	1.52	3.04	Tosoh AIA360
	ng/ml =	14.0	10.5	17.5	1.75	3.50	Siemens Immulite 1000
	ng/ml =	17.9	13.4	22.4	2.25	4.50	Roche Cobas Core EIA
	ng/ml =	17.4	13.0	21.8	2.20	4.40	Roche Elecsys Modular E170
	ng/ml =	17.3	13.0	21.6	2.15	4.30	Beckman Access standardised to Hybritech
	ng/ml =	15.8	11.8	19.8	2.00	4.00	bioMerieux VIDAS TPSA

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	13.2	9.87	16.5	1.67	3.33	Siemens Centaur XP/Classic
	ng/ml =	14.7	11.0	18.4	1.85	3.70	Abbott Architect
	ng/ml =	18.0	13.5	22.5	2.25	4.50	Cobas E411
	ng/ml =	17.9	13.4	22.4	2.25	4.50	Roche Cobas 6000/8000
	ng/ml =	17.8	13.4	22.2	2.20	4.40	Ortho Vitros 3600/5600/ECi PSA II
Salicylate	mmol/l	0.36	0.29	0.44	0.04	0.07	Enzymatic
	mg/dl	5.03	4.03	6.03	0.50	1.00	
Sodium	mmol/l	143	136	150	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	141	133	149	4.00	8.00	Flame photometry
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	144	136	152	4.00	8.00	ISE method - indirect
Theophylline	µmol/l	28.1	22.5	33.7	2.79	5.58	Immunoturbidimetric
	µg/ml	5.06	4.05	6.07	0.51	1.01	
Thyroid Stimulating Hormone	µU/ml =	1.11	0.89	1.33	0.11	0.22	Abbott Architect
	µU/ml =	1.43	1.14	1.72	0.15	0.29	Siemens Centaur XP/Classic
	µU/ml =	1.53	1.23	1.83	0.15	0.30	bioMerieux VIDAS TSH
	µU/ml =	1.74	1.39	2.09	0.18	0.35	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.76	1.41	2.11	0.18	0.35	Diasorin Liaison
	µU/ml =	1.39	1.11	1.67	0.14	0.28	Siemens Immulite 1000
	µU/ml =	1.51	1.21	1.81	0.15	0.30	Siemens Immulite 2000/2500
	µU/ml =	1.48	1.18	1.78	0.15	0.30	Vitros ECi
	µU/ml =	1.62	1.30	1.94	0.16	0.32	Roche Elecsys
	µU/ml =	1.62	1.30	1.94	0.16	0.32	Roche Modular E170
	µU/ml =	1.54	1.23	1.85	0.16	0.31	Tosoh AIA360

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.62	1.30	1.94	0.16	0.32	Roche Cobas E411
	µU/ml =	1.61	1.29	1.93	0.16	0.32	Roche Cobas 6000/8000
	µU/ml =	1.33	1.06	1.60	0.14	0.27	Siemens Centaur XP/Classic TSH3-Ultra
TIBC	µmol/l	50.8	40.2	61.4	5.30	10.60	Ortho Vitros Microslide Systems
	µg/dl	284	225	343	29.50	59.00	
	µmol/l	46.0	36.3	55.7	4.85	9.70	Removal of excess free iron
	µg/dl	257	203	311	27.00	54.00	
	µmol/l	46.8	37.0	56.6	4.90	9.80	FE+UIBC(saturation with iron)
	µg/dl	262	207	317	27.50	55.00	
	µmol/l	48.1	38.0	58.2	5.05	10.10	Direct Colorimetric
	µg/dl	269	212	326	28.50	57.00	
	µmol/l	51.4	40.6	62.2	5.40	10.80	Randox Direct
	µg/dl	287	227	347	30.00	60.00	
Tobramycin	µmol/l	5.64	4.51	6.77	0.57	1.13	Immunoturbidimetric
	µg/ml	2.64	2.11	3.17	0.27	0.53	
Total T3	nmol/l	2.24	1.68	2.80	0.28	0.56	Abbott AXSYM
	ng/ml	1.46	1.09	1.83	0.19	0.37	
	ng/dl	146	109	183	18.50	37.00	Abbott AXSYM
	nmol/l	2.34	1.76	2.92	0.29	0.58	Abbott Architect
	ng/ml	1.52	1.15	1.89	0.19	0.37	
	ng/dl	152	115	189	18.50	37.00	Abbott Architect
	nmol/l	2.93	2.20	3.66	0.37	0.73	Siemens Centaur XP/Classic
	ng/ml	1.91	1.43	2.39	0.24	0.48	
	ng/dl	191	143	239	24.00	48.00	Siemens Centaur XP/Classic
	nmol/l	2.47	1.86	3.08	0.31	0.61	BioMerieux Vidas
	ng/ml	1.61	1.21	2.01	0.20	0.40	
	ng/dl	161	121	201	20.00	40.00	BioMerieux Vidas

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	2.37	1.77	2.97	0.30	0.60	Tosoh AIA360
	ng/ml	1.54	1.15	1.93	0.20	0.39	
	ng/dl	154	115	193	19.50	39.00	Tosoh AIA360
	nmol/l	4.21	3.15	5.27	0.53	1.06	Vitros ECi
	ng/ml	2.74	2.05	3.43	0.35	0.69	
	ng/dl	274	205	343	34.50	69.00	Vitros ECi
	nmol/l	2.58	1.93	3.23	0.33	0.65	Roche Cobas 6000/8000
	ng/ml	1.68	1.26	2.10	0.21	0.42	
	ng/dl	168	126	210	21.00	42.00	Roche Cobas 6000/8000
Total T4	nmol/l	85.2	63.9	107	10.65	21.30	Abbott Architect
	µg/dl	6.65	4.98	8.32	0.84	1.67	
	ng/ml	66.5	49.8	83.2	8.35	16.70	Abbott Architect
	nmol/l	80.7	60.5	101	10.10	20.20	BioMerieux Vidas
	µg/dl	6.29	4.72	7.86	0.79	1.57	
	ng/ml	62.9	47.2	78.6	7.85	15.70	BioMerieux Vidas
	nmol/l	84.0	63.0	105	10.50	21.00	Siemens Immulite 1000
	µg/dl	6.55	4.91	8.19	0.82	1.64	
	ng/ml	65.5	49.1	81.9	8.20	16.40	Siemens Immulite 1000
	nmol/l	91.8	68.9	115	11.45	22.90	Siemens Immulite 2000/2500
	µg/dl	7.16	5.37	8.95	0.90	1.79	
	ng/ml	71.6	53.7	89.5	8.95	17.90	Siemens Immulite 2000/2500
	nmol/l	85.8	64.3	107	10.75	21.50	Roche Modular E170
	µg/dl	6.69	5.02	8.36	0.84	1.67	
	ng/ml	66.9	50.2	83.6	8.35	16.70	Roche Modular E170

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	84.0	63.0	105	10.50	21.00	Roche Cobas E411
	µg/dl	6.55	4.91	8.19	0.82	1.64	
	ng/ml	65.5	49.1	81.9	8.20	16.40	Roche Cobas E411
	nmol/l	83.7	62.8	105	10.45	20.90	Roche Cobas 6000/8000
	µg/dl	6.53	4.90	8.16	0.82	1.63	
	ng/ml	65.3	49.0	81.6	8.15	16.30	Roche Cobas 6000/8000
Transferrin	g/l	1.98	1.59	2.38	0.20	0.39	Immunoturbidimetric
	mg/dl	198	159	237	19.50	39.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.1	114	8.05	16.10	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	80.9	112	7.80	15.60	
	mmol/l	1.28	1.07	1.49	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	113	94.7	131	9.15	18.30	
	mmol/l	1.14	0.95	1.33	0.09	0.19	Agappe - GPO - TOPS
	mg/dl	101	84.4	118	8.30	16.60	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.49	4.79	6.19	0.35	0.70	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.54	4.82	6.26	0.36	0.72	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Agappe - Uricase - PAP
	mg/dl	5.98	5.19	6.77	0.40	0.79	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Agappe - Uricase - TOPS
	mg/dl	5.73	4.99	6.47	0.37	0.74	
Urea	mmol/l	6.86	5.83	7.89	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease end point
	mg/dl	44.7	37.9	51.5	3.40	6.80	
	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease kinetic
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.03	5.98	8.08	0.53	1.05	Urease hypochlorite
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	6.93	5.89	7.97	0.52	1.04	Agappe - Urease GLDH
	mg/dl	41.6	35.4	47.8	3.10	6.20	
	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease Berthelot
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	mmol/l	7.19	6.11	8.27	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Vitamin B12	pmol/l	551	440	661	55.30	110.60	Roche Cobas E411
	pg/ml	746	596	896	75.00	150.00	
Zinc	µmol/l	19.5	15.6	23.4	1.95	3.90	Colorimetric with deproteinisation
	µg/dl	127	102	152	12.50	25.00	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		6.0	4.6	7.4	0.72	1.44	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.6	5.0	8.2	0.79	1.58	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		65.4	58.9	71.9	3.25	6.50	% of total Protein (Beckman Capillary)
beta-globulin		10.0	7.6	12.4	1.20	2.40	% of total Protein (Beckman Capillary)
gamma-globulin		12.0	9.1	14.9	1.44	2.88	% of total Protein (Beckman Capillary)

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Green
	g/dl	4.23	3.59	4.87	0.32	0.64	
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.39	2.15	2.63	0.12	0.24	Arsenazo III
	mg/dl	9.58	8.62	10.5	0.48	0.96	
Cholesterol	mmol/l	4.71	4.09	5.33	0.31	0.62	Cholesterol Oxidase
	mg/dl	182	158	206	12.00	24.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	132	108	156	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	120	96.1	144	11.95	23.90	Alkaline picrate with deproteinization
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	116	92.5	140	11.75	23.50	Alkaline picrate no deproteinization
	mg/dl	1.31	1.05	1.57	0.13	0.26	
	µmol/l	118	94.4	142	11.80	23.60	Randox Enzymatic UV method
	mg/dl	1.33	1.07	1.59	0.13	0.26	
gamma-GT	U/l	55	46	64	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	28	40	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.75	5.74	7.76	0.51	1.01	Hexokinase
	mg/dl	122	103	141	9.50	19.00	
	mmol/l	7.48	6.36	8.60	0.56	1.12	Glucose oxidase
	mg/dl	135	115	155	10.00	20.00	
HDL - Cholesterol	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct HDL PPD
	mg/dl	58.7	49.8	67.6	4.45	8.90	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	57.5	49.0	66.0	4.25	8.50	
	mmol/l	1.65	1.40	1.90	0.13	0.25	Direct Clearance Method
	mg/dl	63.7	54.0	73.4	4.85	9.70	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
LD (LDH)	U/l	455	387	523	34.00	68.00	P->L German methods 37°C
	U/l	329	279	379	25.00	50.00	P->L German methods 30°C
	U/l	231	196	266	17.50	35.00	P->L German methods 25°C
	U/l	447	380	514	33.50	67.00	P->L SFBC 37°C
	U/l	323	274	372	24.50	49.00	P->L SFBC 30°C
	U/l	227	193	261	17.00	34.00	P->L SFBC 25°C
	U/l	237	201	273	18.00	36.00	L->P IFCC 37°C
	U/l	171	145	197	13.00	26.00	L->P IFCC 30°C
	U/l	120	102	138	9.00	18.00	L->P IFCC 25°C
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.11	Xylidyl Blue
	mg/dl	2.31	2.04	2.58	0.14	0.27	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.57	1.34	1.80	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.87	4.15	5.59	0.36	0.72	
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - direct
Protein Total	g/l	61.4	49.1	73.7	6.15	12.30	Biuret reaction end point
	g/dl	6.14	4.91	7.37	0.62	1.23	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.0	115	8.05	16.10	
Uric Acid (Urate)	mmol/l	0.38	0.33	0.43	0.03	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.38	5.54	7.22	0.42	0.84	
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.20	5.39	7.01	0.41	0.81	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Urease end point
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.36	6.25	8.47	0.56	1.11	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.57	6.44	8.70	0.57	1.13	Urease hypochlorite
	mg/dl	45.5	38.7	52.3	3.40	6.80	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Green
	g/dl	4.09	3.48	4.70	0.31	0.61	
Alkaline Phosphatase	U/l	211	180	242	15.50	31.00	Diethanolamine buffer DEA 37°C
	U/l	164	140	188	12.00	24.00	Diethanolamine buffer DEA 30°C
	U/l	135	115	155	10.00	20.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Arsenazo III
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Cholesterol	mmol/l	4.82	4.19	5.45	0.32	0.63	Cholesterol Oxidase
	mg/dl	186	162	210	12.00	24.00	
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	135	111	159	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	92	75	109	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	119	95.1	143	11.95	23.90	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
Glucose	mmol/l	7.15	6.08	8.22	0.54	1.07	Hexokinase
	mg/dl	129	110	148	9.50	19.00	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	7.36	6.26	8.46	0.55	1.10	Glucose oxidase
	mg/dl	133	113	153	10.00	20.00	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.5	44.8	60.2	3.85	7.70	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	3.78	3.47	4.09	0.16	0.31	ISE method - direct
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.4	111	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.94	6.38	0.36	0.72	
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.8	35.6	48.0	3.10	6.20	Bromocresol Green
	g/dl	4.18	3.56	4.80	0.31	0.62	
	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Purple
	g/dl	4.17	3.54	4.80	0.32	0.63	
	g/l	39.5	33.6	45.4	2.95	5.90	Turbidimetric Assays
	g/dl	3.95	3.36	4.54	0.30	0.59	
Alkaline Phosphatase	U/l	104	88	120	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	81	69	93	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	66	56	76	5.00	10.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	15	12	18	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.8	11.7	17.9	1.55	3.10	Colorimetric

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	20.1	15.8	24.4	2.15	4.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.18	0.924	1.44	0.13	0.26	
	µmol/l	19.9	15.7	24.1	2.10	4.20	Diazo with Sulphanilic Acid
	mg/dl	1.16	0.918	1.40	0.12	0.24	
	µmol/l	19.8	15.7	23.9	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.16	0.918	1.40	0.12	0.24	
Bilirubin Total	µmol/l	25.0	19.8	30.2	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.1	19.9	30.3	2.60	5.20	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.32	2.08	2.56	0.12	0.24	NM-BAPTA
	mg/dl	9.30	8.34	10.3	0.48	0.96	
Cholesterol	mmol/l	4.76	4.14	5.38	0.31	0.62	Cholesterol Oxidase
	mg/dl	184	160	208	12.00	24.00	
Chloride	mmol/l	92.7	85.3	100	3.70	7.40	ISE indirect
Cholinesterase	U/l	5842	4674	7010	584.00	1168.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	228	187	269	20.50	41.00	CK-NAC substrate start (DGKC) 37°C
	U/l	143	117	169	13.00	26.00	CK-NAC substrate start (DGKC) 30°C
	U/l	97	79	115	9.00	18.00	CK-NAC substrate start (DGKC) 25°C
	U/l	225	184	266	20.50	41.00	CK-NAC (IFCC) 37°C
	U/l	141	115	167	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	96	78	114	9.00	18.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	123	98.5	148	12.25	24.50	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	123	98.7	147	12.15	24.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	122	97.6	146	12.20	24.40	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	21.0	15.7	26.3	2.65	5.30	Roche Cobas 6000/8000
	ng/dl	1.64	1.22	2.06	0.21	0.42	
	pg/ml	16.4	12.2	20.6	2.10	4.20	Roche Cobas 6000/8000
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	40	34	46	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.04	5.98	8.10	0.53	1.06	Hexokinase
	mg/dl	127	108	146	9.50	19.00	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	7.07	6.01	8.13	0.53	1.06	Glucose oxidase
	mg/dl	127	108	146	9.50	19.00	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PEGME
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Iron	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric with ppt.
	µg/dl	104	85.0	123	9.50	19.00	
	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.59	1.30	1.88	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.7	16.9	1.30	2.60	
LD (LDH)	U/l	445	378	512	33.50	67.00	P->L German methods 37°C
	U/l	321	273	369	24.00	48.00	P->L German methods 30°C
	U/l	226	192	260	17.00	34.00	P->L German methods 25°C
	U/l	452	384	520	34.00	68.00	P->L SFBC 37°C
	U/l	326	277	375	24.50	49.00	P->L SFBC 30°C
	U/l	229	195	263	17.00	34.00	P->L SFBC 25°C
	U/l	225	191	259	17.00	34.00	L->P IFCC 37°C
	U/l	162	138	186	12.00	24.00	L->P IFCC 30°C
	U/l	114	97	131	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	39	31	47	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.26	1.99	2.53	0.14	0.27	
	mmol/l	0.93	0.82	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.27	2.00	2.54	0.14	0.27	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.40	3.75	5.05	0.33	0.65	
	mmol/l	1.39	1.19	1.59	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.31	3.69	4.93	0.31	0.62	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction kinetic
	g/dl	5.87	4.70	7.04	0.59	1.17	
PSA Total	ng/ml =	17.9	13.4	22.4	2.25	4.50	Roche Cobas 6000/8000
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.61	1.29	1.93	0.16	0.32	Roche Cobas 6000/8000
TIBC	µmol/l	45.8	36.2	55.4	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	256	202	310	27.00	54.00	
	µmol/l	46.8	37.0	56.6	4.90	9.80	Direct Colorimetric
	µg/dl	262	207	317	27.50	55.00	
Total T3	nmol/l	2.58	1.93	3.23	0.33	0.65	Roche Cobas 6000/8000
	ng/ml	1.68	1.26	2.10	0.21	0.42	
	ng/dl	168	126	210	21.00	42.00	Roche Cobas 6000/8000
Total T4	nmol/l	83.7	62.8	105	10.45	20.90	Roche Cobas 6000/8000
	µg/dl	6.53	4.90	8.16	0.82	1.63	
	ng/ml	65.3	49.0	81.6	8.15	16.30	Roche Cobas 6000/8000

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.2	115	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.2	111	7.70	15.40	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease end point
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.5	36.1	48.9	3.20	6.40	Bromocresol Green
	g/dl	4.25	3.61	4.89	0.32	0.64	
Alkaline Phosphatase	U/l	104	88	120	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	81	69	93	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	66	56	76	5.00	10.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.8	11.8	17.8	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	18.9	14.9	22.9	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.872	1.35	0.12	0.24	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.20	1.84	0.16	0.32	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	24.5	19.4	29.6	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.26	8.34	10.2	0.46	0.92	
	mmol/l	2.29	2.06	2.52	0.12	0.23	Arsenazo III
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.30	2.07	2.53	0.12	0.23	NM-BAPTA
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Cholesterol	mmol/l	4.88	4.25	5.51	0.32	0.63	Cholesterol Oxidase
	mg/dl	188	164	212	12.00	24.00	
Chloride	mmol/l	98.5	90.7	106	3.90	7.80	ISE indirect
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	139	114	164	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	115	91.6	138	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	117	93.2	141	11.90	23.80	Roche Creatinine Plus
	mg/dl	1.32	1.05	1.59	0.14	0.27	
	µmol/l	124	98.9	149	12.55	25.10	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	117	94.0	140	11.50	23.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.32	1.06	1.58	0.13	0.26	
gamma-GT	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	29	41	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	7.15	6.08	8.22	0.54	1.07	Hexokinase
	mg/dl	129	110	148	9.50	19.00	
	mmol/l	7.16	6.08	8.24	0.54	1.08	Glucose oxidase
	mg/dl	129	110	148	9.50	19.00	
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PEGME
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	57.1	48.6	65.6	4.25	8.50	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
Lactate	mmol/l	1.66	1.36	1.96	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	15.0	12.3	17.7	1.35	2.70	
LD (LDH)	U/l	245	209	281	18.00	36.00	L->P IFCC 37°C
	U/l	177	151	203	13.00	26.00	L->P IFCC 30°C
	U/l	124	106	142	9.00	18.00	L->P IFCC 25°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.28	2.01	2.55	0.14	0.27	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.65	3.94	5.36	0.36	0.71	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.40	3.75	5.05	0.33	0.65	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.9	47.2	70.6	5.85	11.70	Biuret reaction end point
	g/dl	5.89	4.72	7.06	0.59	1.17	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	93.8	79.1	109	7.35	14.70	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Urea	mmol/l	7.07	6.01	8.13	0.53	1.06	Urease kinetic
	mg/dl	42.5	36.1	48.9	3.20	6.40	
	mmol/l	6.92	5.88	7.96	0.52	1.04	Agappe - Urease GLDH
	mg/dl	41.6	35.3	47.9	3.15	6.30	
	mmol/l	7.07	6.01	8.13	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Purple
	g/dl	4.17	3.54	4.80	0.32	0.63	
Alkaline Phosphatase	U/l	104	88	120	8.00	16.00	Roche Integra AMP buffer 37°C
	U/l	81	69	93	6.00	12.00	Roche Integra AMP buffer 30°C
	U/l	66	56	76	5.00	10.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	20.9	16.5	25.3	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	µmol/l	20.6	16.3	24.9	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.21	0.954	1.47	0.13	0.26	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Calcium	mmol/l	2.30	2.07	2.53	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.22	8.30	10.1	0.46	0.92	
	mmol/l	2.27	2.04	2.50	0.12	0.23	Arsenazo III
	mg/dl	9.10	8.18	10.0	0.46	0.92	
	mmol/l	2.33	2.10	2.56	0.12	0.23	NM-BAPTA
	mg/dl	9.34	8.42	10.3	0.46	0.92	
Cholesterol	mmol/l	4.81	4.18	5.44	0.32	0.63	Cholesterol Oxidase
	mg/dl	186	161	211	12.50	25.00	
Chloride	mmol/l	93.3	85.8	101	3.75	7.50	ISE indirect
CK Total	U/l	227	186	268	20.50	41.00	CK-NAC (IFCC) 37°C
	U/l	142	116	168	13.00	26.00	CK-NAC (IFCC) 30°C
	U/l	96	79	113	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	124	99.2	149	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Randox Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.05	6.00	8.10	0.53	1.05	Hexokinase
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	6.98	5.93	8.03	0.53	1.05	Glucose oxidase
	mg/dl	126	107	145	9.50	19.00	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
LD (LDH)	U/l	224	190	258	17.00	34.00	L->P IFCC 37°C
	U/l	162	137	187	12.50	25.00	L->P IFCC 30°C
	U/l	114	96	132	9.00	18.00	L->P IFCC 25°C
Lipase	U/l	38	30	46	4.00	8.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.94	0.82	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.27	2.00	2.54	0.14	0.27	
	mmol/l	0.94	0.83	1.06	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.29	2.02	2.56	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Biuret reaction end point
	g/dl	5.89	4.71	7.07	0.59	1.18	
	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction kinetic
	g/dl	5.93	4.74	7.12	0.60	1.19	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.6	37.6	57.6	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.10	0.93	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.6	114	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.96	6.46	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.73	4.97	6.49	0.38	0.76	
Urea	mmol/l	7.49	6.36	8.62	0.57	1.13	Urease end point
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.22	6.13	8.31	0.55	1.09	Urease kinetic
	mg/dl	43.4	36.8	50.0	3.30	6.60	
	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
Alkaline Phosphatase	U/l	102	87	117	7.50	15.00	Roche Integra AMP buffer 37°C
	U/l	79	68	90	5.50	11.00	Roche Integra AMP buffer 30°C
	U/l	65	56	74	4.50	9.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Randox EPS Liquid and BM/Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	20.0	15.8	24.2	2.10	4.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.17	0.924	1.42	0.12	0.25	
Bilirubin Total	µmol/l	24.1	19.1	29.1	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.41	1.12	1.70	0.15	0.29	
	µmol/l	24.2	19.1	29.3	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazonium ion
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	2.29	2.07	2.51	0.11	0.22	Cresolphthalein complexone
	mg/dl	9.18	8.30	10.1	0.44	0.88	
	mmol/l	2.30	2.07	2.53	0.12	0.23	NM-BAPTA
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Cholesterol	mmol/l	4.70	4.09	5.31	0.31	0.61	Cholesterol Oxidase
	mg/dl	181	158	204	11.50	23.00	
Chloride	mmol/l	93.0	85.6	100	3.70	7.40	ISE indirect
CK Total	U/l	208	170	246	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	41	35	47	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	32	27	37	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.04	5.98	8.10	0.53	1.06	Hexokinase
	mg/dl	127	108	146	9.50	19.00	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	226	192	260	17.00	34.00	L->P IFCC 37°C
	U/l	163	139	187	12.00	24.00	L->P IFCC 30°C
	U/l	115	97	133	9.00	18.00	L->P IFCC 25°C
Lipase	U/l	39	31	47	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.7	47.0	70.4	5.85	11.70	Biuret reaction end point
	g/dl	5.87	4.70	7.04	0.59	1.17	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	47.3	37.4	57.2	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	264	209	319	27.50	55.00	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	79.9	111	7.85	15.70	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.49	4.79	6.19	0.35	0.70	
Urea	mmol/l	6.99	5.94	8.04	0.53	1.05	Urease kinetic
	mg/dl	42.0	35.7	48.3	3.15	6.30	
	mmol/l	6.99	5.94	8.04	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
Alkaline Phosphatase	U/l	247	210	284	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	134	114	154	10.00	20.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	76	65	87	5.50	11.00	Randox liquid stable pNPG7 37°C
Amylase Total	U/l	100	85	115	7.50	15.00	Randox liquid stable pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	24.5	19.6	29.4	2.45	4.90	5th Generation Colorimetric
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	20.8	16.4	25.2	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.22	0.959	1.48	0.13	0.26	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Vanadate Oxidation
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	31.5	24.9	38.1	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.46	2.22	0.19	0.38	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Vanadate Oxidation
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.39	2.15	2.63	0.12	0.24	Arsenazo III
	mg/dl	9.58	8.62	10.5	0.48	0.96	
Cholesterol	mmol/l	4.83	4.20	5.46	0.32	0.63	Cholesterol Oxidase
	mg/dl	186	162	210	12.00	24.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	96.3	88.6	104	3.85	7.70	ISE direct
CK Total	U/l	217	178	256	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	242	198	286	22.00	44.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	120	95.7	144	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Randox Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	7.25	6.16	8.34	0.55	1.09	Hexokinase
	mg/dl	131	111	151	10.00	20.00	
	mmol/l	7.35	6.25	8.45	0.55	1.10	Glucose oxidase
	mg/dl	132	113	151	9.50	19.00	
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	455	387	523	34.00	68.00	P->L German methods 37°C
	U/l	236	201	271	17.50	35.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.17	0.06	0.13	Colorimetric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
Magnesium	mmol/l	0.97	0.85	1.08	0.06	0.12	Xylidyl Blue
	mg/dl	2.35	2.07	2.63	0.14	0.28	
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.43	3.78	5.08	0.33	0.65	

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RX DAYTONA®/IMOLA®/SUZUKA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - direct
	mmol/l	4.07	3.74	4.40	0.17	0.33	Enzymatic
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction end point
	g/dl	6.11	4.89	7.33	0.61	1.22	
Sodium	mmol/l	148	141	155	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
TIBC	µmol/l	51.4	40.6	62.2	5.40	10.80	Direct Colorimetric
	µg/dl	287	227	347	30.00	60.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.3	116	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease kinetic
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.32	6.22	8.42	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	

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SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.6	33.6	45.6	3.00	6.00	Bromocresol Green
	g/dl	3.96	3.36	4.56	0.30	0.60	
	g/l	43.1	36.7	49.5	3.20	6.40	Bromocresol Purple
	g/dl	4.31	3.67	4.95	0.32	0.64	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	132	112	152	10.00	20.00	AMP non-optimised 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	69	58	80	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	26.5	21.2	31.8	2.65	5.30	Enzymatic Colorimetric
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	17.3	13.7	20.9	1.80	3.60	Oxidation to Biliverdin
	mg/dl	1.01	0.801	1.22	0.10	0.21	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Oxidation to Biliverdin
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.18	8.26	10.1	0.46	0.92	
	mmol/l	2.30	2.07	2.53	0.12	0.23	Arsenazo III
	mg/dl	9.22	8.30	10.1	0.46	0.92	
Cholesterol	mmol/l	4.63	4.03	5.23	0.30	0.60	Cholesterol Oxidase
	mg/dl	179	156	202	11.50	23.00	

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SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect
CK Total	U/l	208	170	246	19.00	38.00	CK-NAC substrate start (DGKC) 37°C
	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	119	95.5	143	11.75	23.50	Randox Enzymatic UV method
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	122	97.6	146	12.20	24.40	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	117	93.7	140	11.65	23.30	IDMS traceable
	mg/dl	1.32	1.06	1.58	0.13	0.26	
gamma-GT	U/l	57	49	65	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.93	5.89	7.97	0.52	1.04	Hexokinase
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	7.10	6.04	8.16	0.53	1.06	Glucose oxidase
	mg/dl	128	109	147	9.50	19.00	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	18.8	15.5	22.1	1.65	3.30	Colorimetric without ppt.
	µg/dl	105	86.6	123	9.20	18.40	
Lactate	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	

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SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	221	188	254	16.50	33.00	L->P 37°C
	U/l	460	391	529	34.50	69.00	P->L German methods 37°C
	U/l	227	193	261	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	43	35	51	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.625	0.791	0.04	0.08	
Magnesium	mmol/l	0.95	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.32	2.04	2.60	0.14	0.28	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.6	37.6	57.6	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	51.8	40.9	62.7	5.45	10.90	Direct Colorimetric
	µg/dl	290	229	351	30.50	61.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.9	116	8.05	16.10	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.03	5.24	6.82	0.40	0.79	

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SIEMENS ADVIA 1200/1650/2400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.3	35.9	48.7	3.20	6.40	Bromocresol Purple
	g/dl	4.23	3.59	4.87	0.32	0.64	
Alkaline Phosphatase	U/l	121	103	139	9.00	18.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	46	36	56	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	46	37	55	4.50	9.00	Tris buffer with P5P 37°C
	U/l	45	36	54	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	13.8	10.9	16.7	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.807	0.638	0.976	0.08	0.17	
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.64	1.30	1.98	0.17	0.34	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Cholesterol	mmol/l	4.03	3.50	4.56	0.27	0.53	Dimension-Siemens reagents
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	97.0	89.3	105	3.85	7.70	ISE indirect
CK Total	U/l	203	167	239	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	122	98.0	146	12.00	24.00	Randox Enzymatic UV method
	mg/dl	1.38	1.11	1.65	0.14	0.27	
gamma-GT	U/l	63	54	72	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	71	61	81	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	7.18	6.11	8.25	0.54	1.07	Hexokinase
	mg/dl	129	110	148	9.50	19.00	
HDL - Cholesterol	mmol/l	1.58	1.34	1.82	0.12	0.24	Direct HDL PEGME
	mg/dl	61.0	51.7	70.3	4.65	9.30	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	228	194	262	17.00	34.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	225	192	258	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	172	138	206	17.00	34.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.09	0.96	1.22	0.06	0.13	Spectrophotometric
	mg/dl	0.757	0.667	0.847	0.05	0.09	
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Methylthymol blue
	mg/dl	2.18	1.92	2.44	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.6	49.2	74.0	6.20	12.40	Biuret reaction end point
	g/dl	6.16	4.92	7.40	0.62	1.24	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect

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Siemens Dimension EXL

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.04	0.88	1.20	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	92.0	77.6	106	7.20	14.40	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.66	4.92	6.40	0.37	0.74	
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	Urease end point
	mg/dl	42.4	36.1	48.7	3.15	6.30	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Purple
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	119	101	137	9.00	18.00	Siemens Dimension AMP buffer 37°C
	U/l	122	104	140	9.00	18.00	AMP optimised to IFCC 37°C
	U/l	123	105	141	9.00	18.00	Randox AMP 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	48	39	57	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Siemens - maltopenta/hexaoside 37°C
	U/l	95	81	109	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	48	38	58	5.00	10.00	Tris buffer with P5P 37°C
	U/l	47	38	56	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	13.4	10.6	16.2	1.40	2.80	Diazo with Sulphanilic Acid
	mg/dl	0.784	0.620	0.948	0.08	0.16	
Bilirubin Total	µmol/l	27.9	22.1	33.7	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Dimension-Siemens reagents
	mg/dl	155	135	175	10.00	20.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	96.7	89.0	104	3.85	7.70	ISE indirect
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	204	167	241	18.50	37.00	Dithioerythritol 37°C
	U/l	202	166	238	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	123	98.5	148	12.25	24.50	Randox Enzymatic UV method
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	63	53	73	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	72	61	83	5.50	11.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	7.20	6.12	8.28	0.54	1.08	Hexokinase
	mg/dl	130	110	150	10.00	20.00	
HDL - Cholesterol	mmol/l	1.57	1.34	1.80	0.12	0.23	Direct HDL PPD
	mg/dl	60.6	51.7	69.5	4.45	8.90	
	mmol/l	1.56	1.32	1.80	0.12	0.24	Direct HDL PEGME
	mg/dl	60.2	51.0	69.4	4.60	9.20	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct Clearance Method
	mg/dl	58.7	49.8	67.6	4.45	8.90	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric with ppt.
	µg/dl	101	82.7	119	9.15	18.30	
	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
LD (LDH)	U/l	232	197	267	17.50	35.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	226	192	260	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	175	140	210	17.50	35.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.37	3.72	5.02	0.33	0.65	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.34	3.69	4.99	0.33	0.65	
Potassium	mmol/l	3.94	3.63	4.25	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
TIBC	µmol/l	41.9	33.1	50.7	4.40	8.80	Removal of excess free iron
	µg/dl	234	185	283	24.50	49.00	
	µmol/l	42.7	33.8	51.6	4.45	8.90	Direct Colorimetric
	µg/dl	239	189	289	25.00	50.00	
Triglycerides	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	93.8	78.8	109	7.50	15.00	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	75.8	105	7.25	14.50	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.8	110	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.61	4.89	6.33	0.36	0.72	
Urea	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease end point
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Purple
	g/dl	4.17	3.54	4.80	0.32	0.63	
Alkaline Phosphatase	U/l	124	105	143	9.50	19.00	Siemens Dimension AMP buffer 37°C
	U/l	123	105	141	9.00	18.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	35	53	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	13.6	10.7	16.5	1.45	2.90	Diazo with Sulphanilic Acid
	mg/dl	0.796	0.626	0.966	0.09	0.17	
Bilirubin Total	µmol/l	27.8	22.0	33.6	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Dimension-Siemens reagents
	mg/dl	161	140	182	10.50	21.00	
Chloride	mmol/l	101	92.6	109	4.20	8.40	ISE indirect
CK Total	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	204	168	240	18.00	36.00	Dithioerythritol 37°C

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Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	200	164	236	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Randox Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
gamma-GT	U/l	67	57	77	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	69	59	79	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.94	5.90	7.98	0.52	1.04	Hexokinase
	mg/dl	125	106	144	9.50	19.00	
HDL - Cholesterol	mmol/l	1.55	1.32	1.78	0.12	0.23	Direct HDL PEGME
	mg/dl	59.8	51.0	68.6	4.40	8.80	
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	UV LDH
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	231	197	265	17.00	34.00	L->P IFCC 37°C
Lipase	U/l	177	142	212	17.50	35.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.638	0.806	0.04	0.08	
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.22	3.60	4.84	0.31	0.62	

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RANDOX

Siemens Dimension Vista

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.3	49.0	73.6	6.15	12.30	Biuret reaction end point
	g/dl	6.13	4.90	7.36	0.62	1.23	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.21	1.02	1.40	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	107	90.3	124	8.35	16.70	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.31	4.62	6.00	0.35	0.69	
	mmol/l	0.31	0.27	0.35	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.26	4.57	5.95	0.35	0.69	
Urea	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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VITALAB FLEXOR®

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.2	35.8	48.6	3.20	6.40	Bromocresol Green
	g/dl	4.22	3.58	4.86	0.32	0.64	
Alkaline Phosphatase	U/l	220	187	253	16.50	33.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	µmol/l	31.6	24.9	38.3	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Arsenazo III
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Cholesterol	mmol/l	4.81	4.18	5.44	0.32	0.63	Cholesterol Oxidase
	mg/dl	186	161	211	12.50	25.00	
Creatinine	µmol/l	118	94.4	142	11.80	23.60	Alkaline picrate no deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.99	5.94	8.04	0.53	1.05	Hexokinase
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	7.36	6.26	8.46	0.55	1.10	Glucose oxidase
	mg/dl	133	113	153	10.00	20.00	
LD (LDH)	U/l	219	186	252	16.50	33.00	L->P IFCC 37°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	64.9	51.9	77.9	6.50	13.00	Biuret reaction end point
	g/dl	6.49	5.19	7.79	0.65	1.30	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.07	6.63	0.39	0.78	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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Weiner Lab BT 3000 Plus/CB 350i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.8	35.5	48.1	3.15	6.30	Bromocresol Green
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	135	115	155	10.00	20.00	AMP optimised to IFCC 37°C
	U/l	105	90	120	7.50	15.00	AMP optimised to IFCC 30°C
	U/l	86	73	99	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.42	2.18	2.66	0.12	0.24	Arsenazo III
	mg/dl	9.70	8.74	10.7	0.48	0.96	
Cholesterol	mmol/l	4.37	3.80	4.94	0.29	0.57	Cholesterol Oxidase
	mg/dl	169	147	191	11.00	22.00	
Creatinine	µmol/l	114	90.9	137	11.55	23.10	Alkaline picrate no deproteinization
	mg/dl	1.29	1.03	1.55	0.13	0.26	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	7.19	6.11	8.27	0.54	1.08	Glucose oxidase
	mg/dl	130	110	150	10.00	20.00	
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	

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Lot. No. 948UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2018-07

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	90.3	76.2	104	7.05	14.10	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.36	4.67	6.05	0.35	0.69	
Urea	mmol/l	7.25	6.16	8.34	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.0	50.2	3.30	6.60	
	mmol/l	7.25	6.16	8.34	0.55	1.09	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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