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

CAT. NO. HE1532 **GTIN:** 05055273203608 **SIZE:** 20 x 5ml
CAT. NO. HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
LOT NO. 1090UE **EXPIRY:** 2023-04-28

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

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

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

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

Health and Safety Data Sheets are available on request.

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

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

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

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

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

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

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

MATERIALS PROVIDED
Human Assayed Multi-sera - Level 3 20 x 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

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

Each batch of assayed human serum 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.

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.

The presence of a vertical bar in the margin indicates a technical update from the previous revision.

EC REP Randox Teoranta, Meenmore,
Dungloe, Donegal,
F94 TV06, Ireland

Rev. 28 Oct '21 me

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.6	26.9	36.3	2.35	4.70	Bromocresol Green
	g/dl	3.16	2.69	3.63	0.24	0.47	
	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Purple
	g/dl	3.03	2.58	3.48	0.23	0.45	
Alkaline Phosphatase	U/l	297	253	341	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	293	249	337	22.00	44.00	AMP non-optimised 37°C
	U/l	286	243	329	21.50	43.00	Colorimetric 37°C
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	248	211	285	18.50	37.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	328	279	377	24.50	49.00	Abbott Architect IFCC Cal. 37°C
	U/l	312	265	359	23.50	47.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Colorimetric
	mmol/l	13.4	10.7	16.1	1.35	2.70	Enzymatic
Bile Acids	µmol/l	47.3	37.8	56.8	4.75	9.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.7	22.7	34.7	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.70	1.35	2.05	0.18	0.35	

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	90.9	71.8	110	9.55	19.10	Diazo with Dichloroaniline (DCA)
	mg/dl	5.32	4.20	6.44	0.56	1.12	
	µmol/l	92.1	72.8	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.39	4.26	6.52	0.57	1.13	
	µmol/l	91.0	71.9	110	9.55	19.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.32	4.21	6.43	0.56	1.11	
	µmol/l	90.7	71.7	110	9.50	19.00	Diazonium ion
	mg/dl	5.31	4.19	6.43	0.56	1.12	
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	120	110	130	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.98	6.07	7.89	0.46	0.91	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
	mmol/l	7.01	6.10	7.92	0.46	0.91	Cholesterol Dehydrogenase
	mg/dl	271	235	307	18.00	36.00	
Cholinesterase	U/l	6185	4948	7422	618.50	1237.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	487	400	574	43.50	87.00	CK-NAC serum start (DGKC) 37°C
	U/l	478	392	564	43.00	86.00	CK-NAC substrate start (DGKC) 37°C
	U/l	484	397	571	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	487	399	575	44.00	88.00	Monothioglycerol 37°C
Copper	µmol/l	19.9	15.9	23.9	2.00	4.00	Colorimetric
	µg/dl	127	101	153	13.00	26.00	
Creatinine	µmol/l	404	323	485	40.50	81.00	Alkaline picrate with deproteinization
	mg/dl	4.57	3.65	5.49	0.46	0.92	

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	402	322	482	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.54	3.64	5.44	0.45	0.90	
	µmol/l	390	312	468	39.00	78.00	Enzymatic UV method
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	403	323	483	40.00	80.00	Jaffe rate blanked
	mg/dl	4.55	3.65	5.45	0.45	0.90	
	µmol/l	403	323	483	40.00	80.00	IDMS traceable
	mg/dl	4.55	3.65	5.45	0.45	0.90	
gamma-GT	U/l	170	145	195	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	171	146	196	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	172	146	198	13.00	26.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.54	2.16	2.92	0.19	0.38	Direct HDL PPD
	mg/dl	98.0	83.4	113	7.30	14.60	
	mmol/l	2.45	2.08	2.82	0.19	0.37	Direct HDL Immunoseparation
	mg/dl	94.6	80.3	109	7.15	14.30	
	mmol/l	2.51	2.13	2.89	0.19	0.38	Direct Clearance Method
	mg/dl	96.9	82.2	112	7.35	14.70	
	mmol/l	2.53	2.15	2.91	0.19	0.38	HDL - Ultra
	mg/dl	97.7	83.0	112	7.35	14.70	
Iron	µmol/l	40.7	33.3	48.1	3.70	7.40	Colorimetric with ppt.
	µg/dl	228	186	270	21.00	42.00	

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Abbott Alinity/ Architect c/ci Systems®

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	39.8	32.6	47.0	3.60	7.20	Colorimetric without ppt.
	µg/dl	222	182	262	20.00	40.00	
Lactate	mmol/l	5.54	4.55	6.53	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.9	41.0	58.8	4.45	8.90	
LD (LDH)	U/l	359	305	413	27.00	54.00	L->P 37°C
	U/l	359	305	413	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	60	48	72	6.00	12.00	Other Colorimetric 37°C
Lithium	mmol/l	1.95	1.72	2.18	0.12	0.23	Spectrophotometric
	mg/dl	1.35	1.19	1.51	0.08	0.16	
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Arsenazo III
	mg/dl	4.01	3.52	4.50	0.25	0.49	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Enzymatic
	mg/dl	4.03	3.55	4.51	0.24	0.48	
Osmolality	mOsm/kg	355	284	426	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.73	5.70	7.76	0.52	1.03	
	mmol/l	2.16	1.83	2.49	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.70	5.67	7.73	0.52	1.03	
Potassium	mmol/l	6.21	5.72	6.70	0.25	0.49	ISE method - indirect
Protein Total	g/l	48.7	38.9	58.5	4.90	9.80	Biuret reaction end point
	g/dl	4.87	3.89	5.85	0.49	0.98	
	g/l	48.8	39.0	58.6	4.90	9.80	Biuret reaction kinetic
	g/dl	4.88	3.90	5.86	0.49	0.98	
PSA Total	ng/ml =	31.3	23.5	39.1	3.90	7.80	Abbott Architect

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.85	0.68	1.02	0.09	0.17	Abbott Architect
TIBC	µmol/l	43.9	34.6	53.2	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	245	193	297	26.00	52.00	
	µmol/l	37.6	29.7	45.5	3.95	7.90	Calculated from Transferrin
	µg/dl	210	166	254	22.00	44.00	
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	249	209	289	20.00	40.00	
Urea	mmol/l	21.7	18.4	25.0	1.65	3.30	Urease end point
	mg/dl	130	111	149	9.50	19.00	
	mmol/l	21.5	18.2	24.8	1.65	3.30	Urease kinetic
	mg/dl	129	109	149	10.00	20.00	
	mmol/l	21.5	18.3	24.7	1.60	3.20	BUN
	mg/dl	60.3	51.3	69.3	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.36	8.13	10.6	0.61	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	8.11	10.6	0.62	1.23	

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ABX Pentra 400®

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.9	26.3	35.5	2.30	4.60	Bromocresol Green
	g/dl	3.09	2.63	3.55	0.23	0.46	
ALT (GPT)	U/l	166	133	199	16.50	33.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Bilirubin Total	µmol/l	94.5	74.6	114	9.95	19.90	Diazo with Dichloroaniline (DCA)
	mg/dl	5.53	4.36	6.70	0.59	1.17	
Calcium	mmol/l	3.19	2.87	3.51	0.16	0.32	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Chloride	mmol/l	122	112	132	5.00	10.00	ISE direct
Cholesterol	mmol/l	7.22	6.28	8.16	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	242	316	18.50	37.00	
CK Total	U/l	475	389	561	43.00	86.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	366	293	439	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.14	3.31	4.97	0.42	0.83	
gamma-GT	U/l	178	152	204	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.47	2.10	2.84	0.19	0.37	HDL - Ultra
	mg/dl	95.3	81.1	110	7.10	14.20	
Iron	µmol/l	38.4	31.5	45.3	3.45	6.90	Colorimetric without ppt.
	µg/dl	215	176	254	19.50	39.00	
LD (LDH)	U/l	666	566	766	50.00	100.00	P->L German methods 37°C
	U/l	406	345	467	30.50	61.00	L->P IFCC 37°C
Lipase	U/l	50	40	60	5.00	10.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.60	1.41	1.79	0.10	0.19	Xylidyl Blue
	mg/dl	3.89	3.43	4.35	0.23	0.46	
Phosphate Inorganic	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.16	6.08	8.24	0.54	1.08	
Potassium	mmol/l	5.98	5.50	6.46	0.24	0.48	ISE method - direct
Protein Total	g/l	49.6	39.7	59.5	4.95	9.90	Biuret reaction end point
	g/dl	4.96	3.97	5.95	0.50	0.99	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	BUN
	mg/dl	55.9	47.5	64.3	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.51	0.44	0.58	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.57	7.46	9.68	0.56	1.11	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.00	10.4	0.61	1.21	

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Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.8	25.4	34.2	2.20	4.40	Bromocresol Green
	g/dl	2.98	2.54	3.42	0.22	0.44	
	g/l	30.2	25.6	34.8	2.30	4.60	Bromocresol Purple
	g/dl	3.02	2.56	3.48	0.23	0.46	
Alkaline Phosphatase	U/l	353	300	406	26.50	53.00	AMP optimised to IFCC 37°C
	U/l	320	272	368	24.00	48.00	AMP non-optimised 37°C
ALT (GPT)	U/l	152	121	183	15.50	31.00	Tris buffer without P5P 37°C
	U/l	152	122	182	15.00	30.00	Beckman (Extinction Coefficient) 37°C
Amylase Pancreatic	U/l	239	203	275	18.00	36.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	291	248	334	21.50	43.00	pNP Maltotrioside substrates 37°C
	U/l	300	255	345	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	285	242	328	21.50	43.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	270	229	311	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	292	248	336	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	299	254	344	22.50	45.00	Beckman Synchron AMY7 37°C
	U/l	286	243	329	21.50	43.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	151	121	181	15.00	30.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	23.8	18.8	28.8	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.39	1.10	1.68	0.15	0.29	

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RANDOX

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	91.1	71.9	110	9.60	19.20	Diazo with Dichloroaniline (DCA)
	mg/dl	5.33	4.21	6.45	0.56	1.12	
	µmol/l	90.1	71.1	109	9.50	19.00	Diazo with Sulphanilic Acid
	mg/dl	5.27	4.16	6.38	0.56	1.11	
	µmol/l	89.2	70.5	108	9.35	18.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.22	4.12	6.32	0.55	1.10	
	µmol/l	86.5	68.3	105	9.10	18.20	Diazonium ion
	mg/dl	5.06	4.00	6.12	0.53	1.06	
	µmol/l	96.6	76.4	117	10.10	20.20	Oxidation to Biliverdin/Vanadate
	mg/dl	5.65	4.47	6.83	0.59	1.18	
	µmol/l	88.5	69.9	107	9.30	18.60	DPD (Beckman AU)
	mg/dl	5.18	4.09	6.27	0.55	1.09	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.19	2.88	3.50	0.16	0.31	Ion selective electrode
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Chloride	mmol/l	119	109	129	5.00	10.00	Colorimetric
	mmol/l	119	109	129	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.16	6.23	8.09	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
	mmol/l	7.11	6.19	8.03	0.46	0.92	Cholesterol Dehydrogenase
	mg/dl	274	239	309	17.50	35.00	
Cholinesterase	U/l	5042	4034	6050	504.00	1008.00	Colorimetric Butyrylthiocholine 37°C

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
CK Total	U/l	497	408	586	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	487	399	575	44.00	88.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	355	284	426	35.50	71.00	Alkaline picrate with deproteinization
	mg/dl	4.01	3.21	4.81	0.40	0.80	
	µmol/l	361	289	433	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	384	307	461	38.50	77.00	Enzymatic UV method
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	385	308	462	38.50	77.00	Creatinine PAP method
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	361	289	433	36.00	72.00	Jaffe rate blanked
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	364	291	437	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	369	295	443	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	365	292	438	36.50	73.00	IDMS traceable
	mg/dl	4.12	3.30	4.94	0.41	0.82	
D-3-Hydroxybutyrate	mmol/l	1.09	0.93	1.25	0.08	0.16	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	169	144	194	12.50	25.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	170	145	195	12.50	25.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	169	144	194	12.50	25.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	35	28	42	3.50	7.00	Triethanolamine buffer 50 mmol 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	GOD/02-Beckman method
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose dehydrogenase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.72	2.32	3.12	0.20	0.40	Direct HDL PPD
	mg/dl	105	89.6	120	7.70	15.40	
	mmol/l	2.66	2.26	3.06	0.20	0.40	Direct HDL Immunoseparation
	mg/dl	103	87.2	119	7.90	15.80	
	mmol/l	2.59	2.20	2.98	0.20	0.39	Direct Clearance Method
	mg/dl	100	84.9	115	7.55	15.10	
	mmol/l	2.47	2.10	2.84	0.19	0.37	HDL - Ultra
	mg/dl	95.3	81.1	110	7.10	14.20	
	mmol/l	2.65	2.25	3.05	0.20	0.40	Direct HDL Roche 4th Generation
	mg/dl	102	86.9	117	7.55	15.10	
Iron	µmol/l	40.6	33.3	47.9	3.65	7.30	Colorimetric with ppt.
	µg/dl	227	186	268	20.50	41.00	
	µmol/l	40.6	33.3	47.9	3.65	7.30	Colorimetric without ppt.
	µg/dl	227	186	268	20.50	41.00	
Lactate	mmol/l	5.34	4.38	6.30	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.1	39.5	56.7	4.30	8.60	
LD (LDH)	U/l	366	311	421	27.50	55.00	L->P 37°C

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	787	669	905	59.00	118.00	P->L Scandinavian & Dutch 37°C
	U/l	710	604	816	53.00	106.00	P->L German methods 37°C
	U/l	367	312	422	27.50	55.00	L->P IFCC 37°C
	U/l	369	314	424	27.50	55.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	64	51	77	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	1.89	1.67	2.11	0.11	0.22	Ion selective electrode
	mg/dl	1.31	1.16	1.46	0.08	0.15	
	mmol/l	1.95	1.72	2.18	0.12	0.23	Spectrophotometric
	mg/dl	1.35	1.19	1.51	0.08	0.16	
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Xylidyl Blue
	mg/dl	4.11	3.62	4.60	0.25	0.49	
	mmol/l	1.68	1.48	1.88	0.10	0.20	Methylthymol blue
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Osmolality	mOsm/kg	351	281	421	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.16	1.83	2.49	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.70	5.67	7.73	0.52	1.03	
	mmol/l	2.17	1.85	2.49	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.73	5.74	7.72	0.50	0.99	
	mmol/l	2.19	1.86	2.52	0.17	0.33	Beckman PHOSm (365nm)
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.19	5.70	6.68	0.25	0.49	ISE method - indirect
Protein Total	g/l	48.2	38.6	57.8	4.80	9.60	Biuret reaction end point
	g/dl	4.82	3.86	5.78	0.48	0.96	
	g/l	47.8	38.2	57.4	4.80	9.60	Biuret reaction kinetic
	g/dl	4.78	3.82	5.74	0.48	0.96	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.0	34.0	52.0	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	240	190	290	25.00	50.00	
	µmol/l	42.0	33.2	50.8	4.40	8.80	Direct Colorimetric
	µg/dl	235	186	284	24.50	49.00	
	µmol/l	36.8	29.1	44.5	3.85	7.70	Calculated from Transferrin
	µg/dl	206	163	249	21.50	43.00	
Triglycerides	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	2.77	2.32	3.22	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	245	205	285	20.00	40.00	
	mmol/l	2.73	2.29	3.17	0.22	0.44	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	242	203	281	19.50	39.00	
	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	254	213	295	20.50	41.00	
Urea	mmol/l	21.2	18.0	24.4	1.60	3.20	Beckman-Conductivity
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	21.2	18.1	24.3	1.55	3.10	Urease end point
	mg/dl	127	109	145	9.00	18.00	
	mmol/l	21.4	18.2	24.6	1.60	3.20	Urease kinetic
	mg/dl	129	109	149	10.00	20.00	
	mmol/l	20.6	17.5	23.7	1.55	3.10	Urease hypochlorite
	mg/dl	124	105	143	9.50	19.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	21.4	18.2	24.6	1.60	3.20	BUN
	mg/dl	60.1	51.1	69.1	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.66	8.40	10.9	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.51	8.28	10.7	0.62	1.23	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Spectrophotometric at 280-290
	mg/dl	9.61	8.35	10.9	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.49	8.27	10.7	0.61	1.22	
Zinc	µmol/l	34.9	28.0	41.8	3.45	6.90	Colorimetric with deproteinisation
	µg/dl	228	183	273	22.50	45.00	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.7	26.9	36.5	2.40	4.80	Bromocresol Green
	g/dl	3.17	2.69	3.65	0.24	0.48	
	g/l	31.1	26.4	35.8	2.35	4.70	Bromocresol Purple
	g/dl	3.11	2.64	3.58	0.24	0.47	
Alkaline Phosphatase	U/l	314	267	361	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	315	268	362	23.50	47.00	AMP non-optimised 37°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
Amylase Total	U/l	292	248	336	22.00	44.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Differential rate pH change
Bilirubin Total	µmol/l	86.1	68.0	104	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.04	3.98	6.10	0.53	1.06	
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Ion selective electrode
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.02	2.72	3.32	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	120	110	130	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.20	6.26	8.14	0.47	0.94	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
Cholinesterase	U/l	5371	4297	6445	537.00	1074.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	498	408	588	45.00	90.00	CK-NAC (IFCC) 37°C

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	494	405	583	44.50	89.00	Monothioglycerol 37°C
Creatinine	µmol/l	383	306	460	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	389	311	467	39.00	78.00	Jaffe rate blanked
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	374	299	449	37.50	75.00	IDMS traceable
	mg/dl	4.23	3.38	5.08	0.43	0.85	
gamma-GT	U/l	138	117	159	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	GOD/02-Beckman method
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.5	13.1	17.9	1.20	2.40	Oxygen electrode
	mg/dl	279	236	322	21.50	43.00	
	mmol/l	14.4	12.3	16.5	1.05	2.10	Glucose oxidase
	mg/dl	259	222	296	18.50	37.00	
HDL - Cholesterol	mmol/l	2.59	2.20	2.98	0.20	0.39	Direct HDL PPD
	mg/dl	100	84.9	115	7.55	15.10	
	mmol/l	2.59	2.21	2.97	0.19	0.38	HDL - Ultra
	mg/dl	100	85.3	115	7.35	14.70	
Iron	µmol/l	38.6	31.7	45.5	3.45	6.90	Colorimetric with ppt.
	µg/dl	216	177	255	19.50	39.00	
	µmol/l	41.0	33.7	48.3	3.65	7.30	Colorimetric without ppt.
	µg/dl	229	188	270	20.50	41.00	
Lactate	mmol/l	4.96	4.06	5.86	0.45	0.90	Colorimetric Lactate Oxidase
	mg/dl	44.7	36.6	52.8	4.05	8.10	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	291	248	334	21.50	43.00	L->P 37°C
	U/l	296	251	341	22.50	45.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	71	57	85	7.00	14.00	Other Colorimetric 37°C
Lithium	mmol/l	2.03	1.79	2.27	0.12	0.24	Spectrophotometric
	mg/dl	1.41	1.24	1.58	0.09	0.17	
Magnesium	mmol/l	1.61	1.42	1.80	0.10	0.19	Calmagite
	mg/dl	3.91	3.45	4.37	0.23	0.46	
Osmolality	mOsm/kg	358	286	430	36.00	72.00	Calculated
Phosphate Inorganic	mmol/l	2.18	1.85	2.51	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.76	5.74	7.78	0.51	1.02	
Potassium	mmol/l	6.23	5.73	6.73	0.25	0.50	ISE method - indirect
Protein Total	g/l	48.7	39.0	58.4	4.85	9.70	Biuret reaction end point
	g/dl	4.87	3.90	5.84	0.49	0.97	
	g/l	47.4	37.9	56.9	4.75	9.50	Biuret reaction kinetic
	g/dl	4.74	3.79	5.69	0.48	0.95	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	40.3	31.9	48.7	4.20	8.40	Removal of excess free iron
	µg/dl	225	178	272	23.50	47.00	
Triglycerides	mmol/l	2.86	2.41	3.31	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	253	213	293	20.00	40.00	
	mmol/l	2.94	2.47	3.41	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	260	219	301	20.50	41.00	
Urea	mmol/l	21.0	17.8	24.2	1.60	3.20	Beckman-Conductivity
	mg/dl	126	107	145	9.50	19.00	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	21.5	18.3	24.7	1.60	3.20	Urease kinetic
	mg/dl	129	110	148	9.50	19.00	
	mmol/l	21.5	18.3	24.7	1.60	3.20	BUN
	mg/dl	60.3	51.3	69.3	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.00	7.83	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.00	7.85	10.2	0.58	1.15	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.1	26.4	35.8	2.35	4.70	Bromocresol Green
	g/dl	3.11	2.64	3.58	0.24	0.47	
ALT (GPT)	U/l	153	123	183	15.00	30.00	Tris buffer without P5P 37°C
	U/l	113	91	135	11.00	22.00	Tris buffer without P5P 30°C
	U/l	86	69	103	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	154	124	184	15.00	30.00	Tris buffer without P5P 37°C
	U/l	104	84	124	10.00	20.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	85.5	67.5	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Cholesterol	mmol/l	7.11	6.19	8.03	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
Creatinine	µmol/l	349	279	419	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.94	3.15	4.73	0.40	0.79	
	µmol/l	347	278	416	34.50	69.00	Jaffe rate blanked
	mg/dl	3.92	3.14	4.70	0.39	0.78	
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.1	17.9	1.20	2.40	Glucose oxidase
	mg/dl	279	236	322	21.50	43.00	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	38.8	31.8	45.8	3.50	7.00	Colorimetric without ppt.
	µg/dl	217	178	256	19.50	39.00	
Phosphate Inorganic	mmol/l	2.32	1.97	2.67	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.19	6.11	8.27	0.54	1.08	
Protein Total	g/l	48.6	38.9	58.3	4.85	9.70	Biuret reaction end point
	g/dl	4.86	3.89	5.83	0.49	0.97	
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.74	2.30	3.18	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	242	204	280	19.00	38.00	
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	8.05	10.4	0.60	1.19	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.4	27.5	37.3	2.45	4.90	Bromocresol Green
	g/dl	3.24	2.75	3.73	0.25	0.49	
ALT (GPT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 30°C
	U/l	87	69	105	9.00	18.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	159	128	190	15.50	31.00	Tris buffer without P5P 37°C
	U/l	107	87	127	10.00	20.00	Tris buffer without P5P 30°C
	U/l	76	61	91	7.50	15.00	Tris buffer without P5P 25°C
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Cholesterol	mmol/l	7.05	6.13	7.97	0.46	0.92	Cholesterol Oxidase
	mg/dl	272	237	307	17.50	35.00	
Creatinine	µmol/l	351	281	421	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.97	3.18	4.76	0.40	0.79	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	132	112	152	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	103	88	118	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.88	2.45	3.31	0.22	0.43	Direct HDL PPD
	mg/dl	111	94.6	127	8.20	16.40	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	49.3	39.5	59.1	4.90	9.80	Biuret reaction end point
	g/dl	4.93	3.95	5.91	0.49	0.98	
Triglycerides	mmol/l	2.75	2.31	3.19	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.50	39.00	
	mmol/l	2.64	2.22	3.06	0.21	0.42	L/G Kinase EP. no correction
	mg/dl	234	196	272	19.00	38.00	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease end point
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.27	10.7	0.61	1.22	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.59	8.33	10.9	0.63	1.26	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.8	27.0	36.6	2.40	4.80	Bromocresol Green
	g/dl	3.18	2.70	3.66	0.24	0.48	
Alkaline Phosphatase	U/l	471	400	542	35.50	71.00	Diethanolamine buffer DEA 37°C
	U/l	367	312	422	27.50	55.00	Diethanolamine buffer DEA 30°C
	U/l	301	256	346	22.50	45.00	Diethanolamine buffer DEA 25°C
	U/l	317	269	365	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	247	210	284	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	203	172	234	15.50	31.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	112	90	134	11.00	22.00	Tris buffer without P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	30.5	24.1	36.9	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.78	1.41	2.15	0.19	0.37	
	µmol/l	28.0	22.1	33.9	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
Bilirubin Total	µmol/l	89.4	70.6	108	9.40	18.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.23	4.13	6.33	0.55	1.10	
	µmol/l	82.3	65.0	99.6	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.81	3.80	5.82	0.51	1.01	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	79.5	62.8	96.2	8.35	16.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.65	3.67	5.63	0.49	0.98	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.02	2.72	3.32	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	118	109	127	4.50	9.00	Colorimetric
	mmol/l	112	103	121	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.09	6.17	8.01	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
Cholinesterase	U/l	5283	4227	6339	528.00	1056.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	496	407	585	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	310	255	365	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	350	280	420	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.96	3.16	4.76	0.40	0.80	
	µmol/l	361	289	433	36.00	72.00	Jaffe rate blanked
	mg/dl	4.08	3.27	4.89	0.41	0.81	
gamma-GT	U/l	170	145	195	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	134	114	154	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	105	89	121	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	159	135	183	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	125	106	144	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	98	83	113	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	2.51	2.13	2.89	0.19	0.38	HDL - Ultra
	mg/dl	96.9	82.2	112	7.35	14.70	
Iron	µmol/l	39.3	32.2	46.4	3.55	7.10	Colorimetric with ppt.
	µg/dl	220	180	260	20.00	40.00	
LD (LDH)	U/l	676	575	777	50.50	101.00	P->L Scandinavian & Dutch 37°C
	U/l	488	415	561	36.50	73.00	P->L Scandinavian & Dutch 30°C
	U/l	343	292	394	25.50	51.00	P->L Scandinavian & Dutch 25°C
	U/l	680	578	782	51.00	102.00	P->L German methods 37°C
	U/l	491	417	565	37.00	74.00	P->L German methods 30°C
	U/l	345	293	397	26.00	52.00	P->L German methods 25°C
	U/l	663	563	763	50.00	100.00	P->L SFBC 37°C
	U/l	479	406	552	36.50	73.00	P->L SFBC 30°C
	U/l	336	285	387	25.50	51.00	P->L SFBC 25°C
Magnesium	mmol/l	1.63	1.44	1.82	0.10	0.19	Xylidyl Blue
	mg/dl	3.96	3.50	4.42	0.23	0.46	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.03	3.55	4.51	0.24	0.48	
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Potassium	mmol/l	6.05	5.57	6.53	0.24	0.48	ISE method - direct
Protein Total	g/l	52.0	41.6	62.4	5.20	10.40	Biuret reaction end point
	g/dl	5.20	4.16	6.24	0.52	1.04	
Sodium	mmol/l	157	150	164	3.50	7.00	ISE method - direct

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.75	2.31	3.19	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.50	39.00	
Urea	mmol/l	21.3	18.1	24.5	1.60	3.20	Urease end point
	mg/dl	128	109	147	9.50	19.00	
	mmol/l	21.4	18.2	24.6	1.60	3.20	Urease kinetic
	mg/dl	129	109	149	10.00	20.00	
	mmol/l	21.4	18.2	24.6	1.60	3.20	BUN
	mg/dl	60.1	51.1	69.1	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.11	7.93	10.3	0.59	1.18	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	8.32	10.8	0.62	1.24	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.4	27.5	37.3	2.45	4.90	Bromocresol Green
	g/dl	3.24	2.75	3.73	0.25	0.49	
	g/l	33.2	28.2	38.2	2.50	5.00	Bromocresol Purple
	g/dl	3.32	2.82	3.82	0.25	0.50	
Alkaline Phosphatase	U/l	256	218	294	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	199	170	228	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	164	139	189	12.50	25.00	Roche Integra AMP buffer 25°C
	U/l	252	214	290	19.00	38.00	AMP optimised to IFCC 37°C
	U/l	196	167	225	14.50	29.00	AMP optimised to IFCC 30°C
	U/l	161	137	185	12.00	24.00	AMP optimised to IFCC 25°C
	U/l	247	210	284	18.50	37.00	Colorimetric 37°C
	U/l	192	164	220	14.00	28.00	Colorimetric 30°C
	U/l	158	134	182	12.00	24.00	Colorimetric 25°C
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	256	218	294	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	254	216	292	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	280	238	322	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	279	237	321	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C

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RANDOX

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	30.9	24.4	37.4	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	31.4	24.8	38.0	3.30	6.60	Roche JG factored
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	µmol/l	31.2	24.6	37.8	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Bilirubin Total	µmol/l	80.0	63.2	96.8	8.40	16.80	Diazo with Dichloroaniline (DCA)
	mg/dl	4.68	3.70	5.66	0.49	0.98	
	µmol/l	77.9	61.6	94.2	8.15	16.30	Diazo with Sulphanilic Acid
	mg/dl	4.56	3.60	5.52	0.48	0.96	
	µmol/l	77.2	61.0	93.4	8.10	16.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.52	3.57	5.47	0.48	0.95	
	µmol/l	77.7	61.4	94.0	8.15	16.30	Diazonium ion
	mg/dl	4.55	3.59	5.51	0.48	0.96	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.18	2.86	3.50	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.14	2.83	3.45	0.16	0.31	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	120	110	130	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.89	6.00	7.78	0.45	0.89	Cholesterol Oxidase
	mg/dl	266	232	300	17.00	34.00	
Cholinesterase	U/l	5326	4261	6391	532.50	1065.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	451	370	532	40.50	81.00	CK-NAC serum start (DGKC) 37°C
	U/l	282	232	332	25.00	50.00	CK-NAC serum start (DGKC) 30°C
	U/l	192	157	227	17.50	35.00	CK-NAC serum start (DGKC) 25°C
	U/l	464	381	547	41.50	83.00	CK-NAC substrate start (DGKC) 37°C
	U/l	290	239	341	25.50	51.00	CK-NAC substrate start (DGKC) 30°C
	U/l	197	162	232	17.50	35.00	CK-NAC substrate start (DGKC) 25°C
	U/l	463	379	547	42.00	84.00	CK-NAC (IFCC) 37°C
	U/l	290	237	343	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	197	161	233	18.00	36.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	368	294	442	37.00	74.00	Alkaline picrate with deproteinization
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	µmol/l	371	296	446	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.19	3.34	5.04	0.43	0.85	
	µmol/l	380	304	456	38.00	76.00	Enzymatic UV method
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	375	300	450	37.50	75.00	Roche Creatinine Plus
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	366	293	439	36.50	73.00	Jaffe rate blanked
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	376	301	451	37.50	75.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.25	3.40	5.10	0.43	0.85	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	369	295	443	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	370	296	444	37.00	74.00	IDMS traceable
	mg/dl	4.18	3.34	5.02	0.42	0.84	
gamma-GT	U/l	164	139	189	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	129	110	148	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	86	116	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	175	149	201	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	138	117	159	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	108	92	124	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
HDL - Cholesterol	mmol/l	3.38	2.87	3.89	0.26	0.51	Direct HDL Roche 4th Generation
	mg/dl	130	111	149	9.50	19.00	
Iron	µmol/l	42.1	34.5	49.7	3.80	7.60	Colorimetric with ppt.
	µg/dl	235	193	277	21.00	42.00	
	µmol/l	41.8	34.3	49.3	3.75	7.50	Colorimetric without ppt.
	µg/dl	234	192	276	21.00	42.00	
Lactate	mmol/l	5.46	4.48	6.44	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.2	40.4	58.0	4.40	8.80	
LD (LDH)	U/l	374	318	430	28.00	56.00	L->P 37°C
	U/l	270	230	310	20.00	40.00	L->P 30°C
	U/l	190	161	219	14.50	29.00	L->P 25°C

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	673	572	774	50.50	101.00	P->L German methods 37°C
	U/l	486	413	559	36.50	73.00	P->L German methods 30°C
	U/l	341	290	392	25.50	51.00	P->L German methods 25°C
	U/l	378	321	435	28.50	57.00	L->P IFCC 37°C
	U/l	273	232	314	20.50	41.00	L->P IFCC 30°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	60	48	72	6.00	12.00	Roche Colorimetric 37°C
	U/l	63	50	76	6.50	13.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.04	1.79	2.29	0.13	0.25	Ion selective electrode
	mg/dl	1.42	1.24	1.60	0.09	0.18	
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Calmagite
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.65	1.46	1.84	0.10	0.19	Xylidyl Blue
	mg/dl	4.01	3.55	4.47	0.23	0.46	
	mmol/l	1.68	1.48	1.88	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.94	5.92	7.96	0.51	1.02	
	mmol/l	2.23	1.90	2.56	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.91	5.89	7.93	0.51	1.02	
Potassium	mmol/l	6.27	5.77	6.77	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	
	g/l	47.3	37.9	56.7	4.70	9.40	Biuret reaction kinetic
	g/dl	4.73	3.79	5.67	0.47	0.94	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.3	34.2	52.4	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	242	191	293	25.50	51.00	
Triglycerides	mmol/l	2.83	2.37	3.29	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.86	2.40	3.32	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	253	212	294	20.50	41.00	
	mmol/l	2.84	2.38	3.30	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	251	211	291	20.00	40.00	
	mmol/l	2.86	2.41	3.31	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	253	213	293	20.00	40.00	
Urea	mmol/l	20.9	17.8	24.0	1.55	3.10	Urease end point
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	20.7	17.6	23.8	1.55	3.10	Urease kinetic
	mg/dl	124	106	142	9.00	18.00	
	mmol/l	20.7	17.6	23.8	1.55	3.10	BUN
	mg/dl	58.1	49.4	66.8	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.42	8.20	10.6	0.61	1.22	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.42	8.20	10.6	0.61	1.22	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.36	8.13	10.6	0.61	1.23	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	33.4	28.4	38.4	2.50	5.00	Bromocresol Green
	g/dl	3.34	2.84	3.84	0.25	0.50	
Alkaline Phosphatase	U/l	444	377	511	33.50	67.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
Bilirubin Total	µmol/l	88.0	69.6	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.15	4.07	6.23	0.54	1.08	
Calcium	mmol/l	3.04	2.73	3.35	0.16	0.31	Arsenazo III
	mg/dl	12.2	10.9	13.5	0.65	1.30	
Cholesterol	mmol/l	7.08	6.16	8.00	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	238	308	17.50	35.00	
CK Total	U/l	488	400	576	44.00	88.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	349	279	419	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.94	3.15	4.73	0.40	0.79	
	µmol/l	389	311	467	39.00	78.00	Creatinine PAP method
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	355	284	426	35.50	71.00	Jaffe rate blanked
	mg/dl	4.01	3.21	4.81	0.40	0.80	
gamma-GT	U/l	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
Iron	µmol/l	38.9	31.9	45.9	3.50	7.00	Colorimetric without ppt.
	µg/dl	217	178	256	19.50	39.00	
LD (LDH)	U/l	737	627	847	55.00	110.00	P->L Scandinavian & Dutch 37°C
	U/l	372	316	428	28.00	56.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.15	1.82	2.48	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.67	5.64	7.70	0.52	1.03	
Protein Total	g/l	49.8	39.8	59.8	5.00	10.00	Biuret reaction end point
	g/dl	4.98	3.98	5.98	0.50	1.00	
Triglycerides	mmol/l	2.74	2.30	3.18	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	242	204	280	19.00	38.00	
	mmol/l	2.79	2.35	3.23	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	247	208	286	19.50	39.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	248	208	288	20.00	40.00	
Urea	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease end point
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.8	17.7	23.9	1.55	3.10	Urease kinetic
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	20.8	17.7	23.9	1.55	3.10	BUN
	mg/dl	58.4	49.6	67.2	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.53	8.28	10.8	0.63	1.25	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.66	8.42	10.9	0.62	1.24	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.53	8.28	10.8	0.63	1.25	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.2	26.5	35.9	2.35	4.70	Bromocresol Green
	g/dl	3.12	2.65	3.59	0.24	0.47	
Alkaline Phosphatase	U/l	395	336	454	29.50	59.00	Diethanolamine buffer DEA 37°C
	U/l	308	262	354	23.00	46.00	Diethanolamine buffer DEA 30°C
	U/l	252	215	289	18.50	37.00	Diethanolamine buffer DEA 25°C
	U/l	258	219	297	19.50	39.00	AMP optimised to IFCC 37°C
	U/l	201	171	231	15.00	30.00	AMP optimised to IFCC 30°C
	U/l	165	140	190	12.50	25.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	112	90	134	11.00	22.00	Tris buffer without P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 25°C
Amylase Total	U/l	271	230	312	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	80	122	10.50	21.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	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	26.9	21.3	32.5	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.57	1.25	1.89	0.16	0.32	
Bilirubin Total	µmol/l	89.3	70.5	108	9.40	18.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.22	4.12	6.32	0.55	1.10	

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	91.1	72.0	110	9.55	19.10	Diazo with Sulphanilic Acid
	mg/dl	5.33	4.21	6.45	0.56	1.12	
	µmol/l	86.3	68.1	105	9.10	18.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.05	3.98	6.12	0.54	1.07	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.14	2.83	3.45	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	119	110	128	4.50	9.00	Colorimetric
	mmol/l	118	108	128	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
Cholinesterase	U/l	5186	4149	6223	518.50	1037.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	496	407	585	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	310	255	365	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	359	287	431	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.06	3.24	4.88	0.41	0.82	
	µmol/l	350	280	420	35.00	70.00	Jaffe rate blanked
	mg/dl	3.96	3.16	4.76	0.40	0.80	
	µmol/l	372	298	446	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.20	3.37	5.03	0.42	0.83	
gamma-GT	U/l	159	135	183	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	125	106	144	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	98	83	113	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	169	143	195	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	133	113	153	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	104	88	120	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.37	2.01	2.73	0.18	0.36	Direct HDL PPD
	mg/dl	91.5	77.6	105	6.95	13.90	
	mmol/l	2.64	2.24	3.04	0.20	0.40	Direct HDL Roche 4th Generation
	mg/dl	102	86.5	118	7.75	15.50	
Iron	µmol/l	39.6	32.4	46.8	3.60	7.20	Colorimetric without ppt.
	µg/dl	221	181	261	20.00	40.00	
LD (LDH)	U/l	684	581	787	51.50	103.00	P->L German methods 37°C
	U/l	494	419	569	37.50	75.00	P->L German methods 30°C
	U/l	347	295	399	26.00	52.00	P->L German methods 25°C
	U/l	372	316	428	28.00	56.00	L->P IFCC 37°C
	U/l	269	228	310	20.50	41.00	L->P IFCC 30°C
	U/l	189	160	218	14.50	29.00	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.31	5.81	6.81	0.25	0.50	ISE method - indirect
Protein Total	g/l	47.9	38.3	57.5	4.80	9.60	Biuret reaction end point
	g/dl	4.79	3.83	5.75	0.48	0.96	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	48.9	38.6	59.2	5.15	10.30	Direct Colorimetric
	µg/dl	273	216	330	28.50	57.00	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.77	2.32	3.22	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	245	205	285	20.00	40.00	
	mmol/l	2.75	2.31	3.19	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	243	204	282	19.50	39.00	
Urea	mmol/l	21.7	18.5	24.9	1.60	3.20	Urease end point
	mg/dl	130	111	149	9.50	19.00	
	mmol/l	21.1	17.9	24.3	1.60	3.20	Urease kinetic
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	21.1	17.9	24.3	1.60	3.20	BUN
	mg/dl	59.2	50.3	68.1	4.45	8.90	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	
	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.11	7.93	10.3	0.59	1.18	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.7	26.9	36.5	2.40	4.80	Bromocresol Green
	g/dl	3.17	2.69	3.65	0.24	0.48	
Alkaline Phosphatase	U/l	451	383	519	34.00	68.00	Diethanolamine buffer DEA 37°C
	U/l	351	298	404	26.50	53.00	Diethanolamine buffer DEA 30°C
	U/l	288	245	331	21.50	43.00	Diethanolamine buffer DEA 25°C
	U/l	310	264	356	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	241	206	276	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	198	169	227	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	79	63	95	8.00	16.00	Tris buffer without P5P 25°C
Amylase Total	U/l	293	249	337	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	67	54	80	6.50	13.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	87.2	68.9	106	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.10	4.03	6.17	0.54	1.07	
	µmol/l	92.0	72.7	111	9.65	19.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.38	4.25	6.51	0.57	1.13	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.94	6.03	7.85	0.46	0.91	Cholesterol Oxidase
	mg/dl	268	233	303	17.50	35.00	
Cholinesterase	U/l	5342	4273	6411	534.50	1069.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	436	357	515	39.50	79.00	CK-NAC (IFCC) 37°C
	U/l	273	223	323	25.00	50.00	CK-NAC (IFCC) 30°C
	U/l	185	152	218	16.50	33.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	367	294	440	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.15	3.32	4.98	0.42	0.83	
	µmol/l	397	318	476	39.50	79.00	Creatinine PAP method
	mg/dl	4.49	3.59	5.39	0.45	0.90	
	µmol/l	415	332	498	41.50	83.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.69	3.75	5.63	0.47	0.94	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	112	152	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	103	88	118	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	166	141	191	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	131	111	151	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	102	87	117	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.45	2.08	2.82	0.19	0.37	HDL - Ultra
	mg/dl	94.6	80.3	109	7.15	14.30	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	40.0	32.8	47.2	3.60	7.20	Colorimetric without ppt.
	µg/dl	224	183	265	20.50	41.00	
LD (LDH)	U/l	719	611	827	54.00	108.00	P->L German methods 37°C
	U/l	519	441	597	39.00	78.00	P->L German methods 30°C
	U/l	365	310	420	27.50	55.00	P->L German methods 25°C
	U/l	750	638	862	56.00	112.00	P->L SFBC 37°C
	U/l	542	461	623	40.50	81.00	P->L SFBC 30°C
	U/l	380	323	437	28.50	57.00	P->L SFBC 25°C
Lipase	U/l	77	62	92	7.50	15.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Xylidyl Blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.69	1.49	1.89	0.10	0.20	Enzymatic
	mg/dl	4.11	3.62	4.60	0.25	0.49	
Phosphate Inorganic	mmol/l	2.12	1.80	2.44	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.57	5.58	7.56	0.50	0.99	
Potassium	mmol/l	6.22	5.72	6.72	0.25	0.50	ISE method - indirect
Protein Total	g/l	48.6	38.9	58.3	4.85	9.70	Biuret reaction end point
	g/dl	4.86	3.89	5.83	0.49	0.97	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.83	2.37	3.29	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	21.5	18.3	24.7	1.60	3.20	Urease kinetic
	mg/dl	129	110	148	9.50	19.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	21.5	18.3	24.7	1.60	3.20	BUN
	mg/dl	60.3	51.3	69.3	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.74	7.59	9.89	0.58	1.15	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.19	8.00	10.4	0.60	1.19	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.3	26.6	36.0	2.35	4.70	Bromocresol Green
	g/dl	3.13	2.66	3.60	0.24	0.47	
Alkaline Phosphatase	U/l	295	251	339	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	230	196	264	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	189	160	218	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
	U/l	118	94	142	12.00	24.00	Tris buffer without P5P 30°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	164	131	197	16.50	33.00	Tris buffer without P5P 37°C
	U/l	111	89	133	11.00	22.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	86.1	68.0	104	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.04	3.98	6.10	0.53	1.06	
	µmol/l	84.6	66.8	102	8.90	17.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.95	3.91	5.99	0.52	1.04	
	µmol/l	88.3	69.8	107	9.25	18.50	Nitrobenzenediazonium salt
	mg/dl	5.17	4.08	6.26	0.55	1.09	
Calcium	mmol/l	3.21	2.88	3.54	0.17	0.33	Arsenazo III
	mg/dl	12.9	11.5	14.3	0.70	1.40	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28 Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	492	404	580	44.00	88.00	CK-NAC (IFCC) 37°C
	U/l	308	253	363	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	209	172	246	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	364	291	437	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	399	319	479	40.00	80.00	Enzymatic UV method
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	370	296	444	37.00	74.00	Jaffe rate blanked
	mg/dl	4.18	3.34	5.02	0.42	0.84	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	132	112	152	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	103	88	118	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.1	13.6	18.6	1.25	2.50	Hexokinase
	mg/dl	290	245	335	22.50	45.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.87	2.44	3.30	0.22	0.43	Direct Clearance Method
	mg/dl	111	94.2	128	8.40	16.80	
Iron	µmol/l	40.3	33.1	47.5	3.60	7.20	Colorimetric without ppt.
	µg/dl	225	185	265	20.00	40.00	
LD (LDH)	U/l	882	749	1015	66.50	133.00	P->L Scandinavian & Dutch 37°C
	U/l	637	541	733	48.00	96.00	P->L Scandinavian & Dutch 30°C
	U/l	447	380	514	33.50	67.00	P->L Scandinavian & Dutch 25°C
	U/l	366	311	421	27.50	55.00	L->P IFCC 37°C
	U/l	264	225	303	19.50	39.00	L->P IFCC 30°C
	U/l	186	158	214	14.00	28.00	L->P IFCC 25°C

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.17	5.67	6.67	0.25	0.50	ISE method - direct
Protein Total	g/l	49.0	39.2	58.8	4.90	9.80	Biuret reaction end point
	g/dl	4.90	3.92	5.88	0.49	0.98	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.90	2.43	3.37	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	257	215	299	21.00	42.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	249	209	289	20.00	40.00	
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease end point
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	Urease kinetic
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	BUN
	mg/dl	57.3	48.7	65.9	4.30	8.60	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.64	8.40	10.9	0.62	1.24	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.17	7.98	10.4	0.60	1.19	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.56	8.32	10.8	0.62	1.24	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	389	307	471	41.00	82.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	294	232	356	31.00	62.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	220	174	266	23.00	46.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	46.4	31.1	61.7	7.65	15.30	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	31.3	26.6	36.0	2.35	4.70	Bromocresol Green
	g/dl	3.13	2.66	3.60	0.24	0.47	
	g/l	30.1	25.5	34.7	2.30	4.60	Bromocresol Purple
	g/dl	3.01	2.55	3.47	0.23	0.46	
	g/l	30.1	25.6	34.6	2.25	4.50	Ortho Vitros Microslide Systems
	g/dl	3.01	2.56	3.46	0.23	0.45	
	g/l	28.9	24.6	33.2	2.15	4.30	Turbidimetric Assays
	g/dl	2.89	2.46	3.32	0.22	0.43	
Alkaline Phosphatase	U/l	241	204	278	18.50	37.00	Ortho Vitros Microslide Systems 37°C
	U/l	411	349	473	31.00	62.00	Diethanolamine buffer DEA 37°C
	U/l	320	272	368	24.00	48.00	Diethanolamine buffer DEA 30°C
	U/l	263	223	303	20.00	40.00	Diethanolamine buffer DEA 25°C
	U/l	311	264	358	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	242	206	278	18.00	36.00	AMP optimised to IFCC 30°C
	U/l	199	169	229	15.00	30.00	AMP optimised to IFCC 25°C
	U/l	313	266	360	23.50	47.00	AMP non-optimised 37°C
	U/l	244	207	281	18.50	37.00	AMP non-optimised 30°C
	U/l	200	170	230	15.00	30.00	AMP non-optimised 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	146	117	175	14.50	29.00	Colorimetric 37°C
	U/l	108	87	129	10.50	21.00	Colorimetric 30°C
	U/l	82	66	98	8.00	16.00	Colorimetric 25°C
	U/l	157	126	188	15.50	31.00	Ortho Vitros Microslide Systems 37°C
	U/l	158	126	190	16.00	32.00	Tris buffer with P5P 37°C
	U/l	117	93	141	12.00	24.00	Tris buffer with P5P 30°C
	U/l	89	71	107	9.00	18.00	Tris buffer with P5P 25°C
	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer without P5P 25°C
	U/l	144	115	173	14.50	29.00	Tris buffer SCE 37°C
	U/l	107	85	129	11.00	22.00	Tris buffer SCE 30°C
	U/l	81	65	97	8.00	16.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	250	213	287	18.50	37.00	Immunoinhibition EPS substrate 37°C
	U/l	247	210	284	18.50	37.00	Roche EPS Liquid 37°C
	U/l	292	248	336	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	305	259	351	23.00	46.00	pNP Maltotrioside substrates 37°C
	U/l	291	247	335	22.00	44.00	Siemens - blocked pNPG7 37°C
	U/l	234	199	269	17.50	35.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	304	258	350	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	291	247	335	22.00	44.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	275	234	316	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	186	158	214	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	273	232	314	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	271	230	312	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	330	281	379	24.50	49.00	Siemens 2-chloro-pNPG3 37°C
	U/l	279	237	321	21.00	42.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	292	248	336	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	294	250	338	22.00	44.00	Beckman Synchron AMY7 37°C
	U/l	297	253	341	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
	U/l	328	278	378	25.00	50.00	Abbott Architect IFCC Cal. 37°C
	U/l	312	265	359	23.50	47.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	286	243	329	21.50	43.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	275	233	317	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.02	0.84	1.20	0.09	0.18	Immunoturbidimetric
	mg/dl	102	83.6	120	9.20	18.40	
Apolipoprotein B	g/l	0.55	0.45	0.64	0.05	0.10	Immunoturbidimetric
	mg/dl	54.6	44.8	64.4	4.90	9.80	
AST (GOT)	U/l	148	118	178	15.00	30.00	Colorimetric 37°C
	U/l	100	80	120	10.00	20.00	Colorimetric 30°C
	U/l	70	56	84	7.00	14.00	Colorimetric 25°C
	U/l	193	155	231	19.00	38.00	Ortho Vitros Microslide visible slide 37°C
	U/l	190	152	228	19.00	38.00	Tris buffer with P5P 37°C
	U/l	128	103	153	12.50	25.00	Tris buffer with P5P 30°C
	U/l	90	72	108	9.00	18.00	Tris buffer with P5P 25°C
	U/l	148	119	177	14.50	29.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	57	83	6.50	13.00	Tris buffer without P5P 25°C
	U/l	146	117	175	14.50	29.00	Tris buffer SCE 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer SCE 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer SCE 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Colorimetric
	mmol/l	15.6	12.4	18.8	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	13.7	10.8	16.6	1.45	2.90	Differential rate pH change
	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
	mmol/l	14.3	11.3	17.3	1.50	3.00	Ion selective electrode
Bile Acids	µmol/l	48.5	38.8	58.2	4.85	9.70	4th Generation Colorimetric
	µmol/l	47.9	38.3	57.5	4.80	9.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	26.9	21.3	32.5	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	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	28.7	22.7	34.7	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	31.9	25.2	38.6	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.87	1.47	2.27	0.20	0.40	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Modified Jendrassik
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Bilirubin Total	µmol/l	81.8	64.7	98.9	8.55	17.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.79	3.78	5.80	0.51	1.01	
	µmol/l	97.3	76.9	118	10.20	20.40	Diazo with Dichloroaniline (DCA)
	mg/dl	5.69	4.50	6.88	0.60	1.19	
	µmol/l	87.5	69.1	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.12	4.04	6.20	0.54	1.08	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	83.2	65.7	101	8.75	17.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.87	3.84	5.90	0.52	1.03	
	µmol/l	86.1	68.0	104	9.05	18.10	Nitrobenzenediazonium salt
	mg/dl	5.04	3.98	6.10	0.53	1.06	
	µmol/l	82.9	65.5	100	8.70	17.40	Diazonium ion
	mg/dl	4.85	3.83	5.87	0.51	1.02	
	µmol/l	96.0	75.9	116	10.05	20.10	Oxidation to Biliverdin/Vanadate
	mg/dl	5.62	4.44	6.80	0.59	1.18	
	µmol/l	94.5	74.7	114	9.90	19.80	Modified Jendrassik
	mg/dl	5.53	4.37	6.69	0.58	1.16	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.14	2.83	3.45	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.06	2.76	3.36	0.15	0.30	Ion selective electrode
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Methylthymol blue
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.11	2.79	3.43	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.04	2.74	3.34	0.15	0.30	Phosphonazo
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.14	2.83	3.45	0.16	0.31	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	1.17	1.05	1.29	0.06	0.12	Ionised calcium
	mg/dl	4.69	4.21	5.17	0.24	0.48	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	118	109	127	4.50	9.00	Colorimetric
	mmol/l	121	111	131	5.00	10.00	Ortho Vitros Microslide Systems
	mmol/l	119	109	129	5.00	10.00	ISE indirect
	mmol/l	119	109	129	5.00	10.00	ISE direct
	mmol/l	132	121	143	5.50	11.00	Optical Fluorescence
Cholesterol	mmol/l	6.73	5.85	7.61	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	260	226	294	17.00	34.00	
	mmol/l	7.03	6.11	7.95	0.46	0.92	Cholesterol Oxidase
	mg/dl	271	236	306	17.50	35.00	
	mmol/l	7.02	6.11	7.93	0.46	0.91	Cholesterol Dehydrogenase
	mg/dl	271	236	306	17.50	35.00	
Cholinesterase	U/l	5260	4208	6312	526.00	1052.00	Colorimetric Benzoylcholine 37°C
	U/l	5397	4318	6476	539.50	1079.00	Colorimetric Butyrylthiocholine 37°C
	U/l	5120	4096	6144	512.00	1024.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	407	333	481	37.00	74.00	Ortho Vitros Microslide Systems 37°C
	U/l	485	398	572	43.50	87.00	CK-NAC serum start (DGKC) 37°C
	U/l	304	249	359	27.50	55.00	CK-NAC serum start (DGKC) 30°C
	U/l	206	169	243	18.50	37.00	CK-NAC serum start (DGKC) 25°C
	U/l	471	386	556	42.50	85.00	CK-NAC substrate start (DGKC) 37°C
	U/l	295	242	348	26.50	53.00	CK-NAC substrate start (DGKC) 30°C
	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 25°C
	U/l	474	389	559	42.50	85.00	CK-NAC (IFCC) 37°C
	U/l	297	244	350	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	495	406	584	44.50	89.00	Monothioglycerol 37°C
	U/l	310	254	366	28.00	56.00	Monothioglycerol 30°C
	U/l	210	173	247	18.50	37.00	Monothioglycerol 25°C
	U/l	458	376	540	41.00	82.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	287	235	339	26.00	52.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	195	160	230	17.50	35.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	26.2	20.9	31.5	2.65	5.30	Atomic absorption
	µg/dl	167	133	201	17.00	34.00	
	µmol/l	27.5	22.0	33.0	2.75	5.50	Colorimetric
	µg/dl	175	140	210	17.50	35.00	
Cortisol	nmol/l	1197	898	1496	149.50	299.00	Roche Cobas E411
	µg/dl	43.1	32.3	53.9	5.40	10.80	
Creatinine	µmol/l	359	287	431	36.00	72.00	Alkaline picrate with deproteinization
	mg/dl	4.06	3.24	4.88	0.41	0.82	
	µmol/l	368	294	442	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	µmol/l	386	309	463	38.50	77.00	Enzymatic UV method
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	381	305	457	38.00	76.00	Creatinine PAP method
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	360	288	432	36.00	72.00	Jaffe rate blanked
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	383	306	460	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	372	298	446	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.20	3.37	5.03	0.42	0.83	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	401	321	481	40.00	80.00	Vitros IDMS Traceable
	mg/dl	4.53	3.63	5.43	0.45	0.90	
	µmol/l	379	303	455	38.00	76.00	IDMS traceable
	mg/dl	4.28	3.42	5.14	0.43	0.86	
D-3-Hydroxybutyrate	mmol/l	1.09	0.93	1.25	0.08	0.16	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.92	3.14	4.70	0.39	0.78	Immunoturbidimetric
	ng/ml	3.06	2.45	3.67	0.31	0.61	
Folate	nmol/l	18.9	14.3	23.4	2.29	4.57	Roche Cobas 6000/8000
	ng/ml	8.32	6.31	10.3	1.01	2.01	
Free T4	pmol/l	48.2	36.1	60.3	6.05	12.10	Abbott Architect
	ng/dl	3.76	2.82	4.70	0.47	0.94	
	pg/ml	37.6	28.2	47.0	4.70	9.40	Abbott Architect
	pmol/l	64.6	48.4	80.8	8.10	16.20	Siemens Centaur XP/XPT/Classic
	ng/dl	5.04	3.78	6.30	0.63	1.26	
	pg/ml	50.4	37.8	63.0	6.30	12.60	Siemens Centaur XP/XPT/Classic
	pmol/l	67.4	50.5	84.3	8.45	16.90	Siemens Immulite 2000/2500
	ng/dl	5.26	3.94	6.58	0.66	1.32	
	pg/ml	52.6	39.4	65.8	6.60	13.20	Siemens Immulite 2000/2500
	pmol/l	68.7	51.5	85.9	8.60	17.20	Siemens Immulite 1000
	ng/dl	5.36	4.02	6.70	0.67	1.34	
	pg/ml	53.6	40.2	67.0	6.70	13.40	Siemens Immulite 1000
	pmol/l	64.0	48.0	80.0	8.00	16.00	Beckman DxI800
	ng/dl	4.99	3.74	6.24	0.63	1.25	
	pg/ml	49.9	37.4	62.4	6.25	12.50	Beckman DxI800

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	59.5	44.6	74.4	7.45	14.90	Beckman Access
	ng/dl	4.64	3.48	5.80	0.58	1.16	
	pg/ml	46.4	34.8	58.0	5.80	11.60	Beckman Access
	pmol/l	75.4	56.6	94.2	9.40	18.80	Tosoh Series
	ng/dl	5.88	4.41	7.35	0.74	1.47	
	pg/ml	58.8	44.1	73.5	7.35	14.70	Tosoh Series
	pmol/l	77.0	57.8	96.2	9.60	19.20	Roche Cobas E411
	ng/dl	6.01	4.51	7.51	0.75	1.50	
	pg/ml	60.1	45.1	75.1	7.50	15.00	Roche Cobas E411
	pmol/l	78.6	59.0	98.2	9.80	19.60	Roche Cobas 6000/8000
	ng/dl	6.13	4.60	7.66	0.77	1.53	
	pg/ml	61.3	46.0	76.6	7.65	15.30	Roche Cobas 6000/8000
	pmol/l	72.9	54.6	91.2	9.15	18.30	Biomerieux Vidas FT4N Kit
	ng/dl	5.69	4.26	7.12	0.72	1.43	
	pg/ml	56.9	42.6	71.2	7.15	14.30	Biomerieux Vidas FT4N Kit
	pmol/l	73.9	55.4	92.4	9.25	18.50	Siemens Centaur CP
	ng/dl	5.76	4.32	7.20	0.72	1.44	
	pg/ml	57.6	43.2	72.0	7.20	14.40	Siemens Centaur CP
Gentamicin	µmol/l	19.9	15.9	23.9	2.00	4.00	Immunoturbidimetric
	µg/ml	9.51	7.60	11.4	0.96	1.91	
gamma-GT	U/l	166	141	191	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	131	111	151	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	87	117	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	203	173	233	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	150	127	173	11.50	23.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	118	100	136	9.00	18.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	93	78	108	7.50	15.00	Gamma glutamyl-4-nitroanilide 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	116	156	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	188	160	216	14.00	28.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	148	126	170	11.00	22.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	116	99	133	8.50	17.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	33	26	40	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	25	20	30	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	20	16	24	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.8	12.6	17.0	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	267	227	307	20.00	40.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose dehydrogenase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	15.5	13.1	17.9	1.20	2.40	Oxygen electrode
	mg/dl	279	236	322	21.50	43.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.62	2.23	3.01	0.20	0.39	Direct HDL PPD
	mg/dl	101	86.1	116	7.45	14.90	
	mmol/l	2.58	2.19	2.97	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	99.6	84.5	115	7.55	15.10	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.32	1.97	2.67	0.18	0.35	Vitros Magnetic HDL
	mg/dl	89.6	76.0	103	6.80	13.60	
	mmol/l	2.42	2.06	2.78	0.18	0.36	Direct Clearance Method
	mg/dl	93.4	79.5	107	6.95	13.90	
	mmol/l	2.22	1.89	2.55	0.17	0.33	Vitros 5.1 FS microtip assay
	mg/dl	85.7	73.0	98.4	6.35	12.70	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	84.9	72.2	97.6	6.35	12.70	
	mmol/l	2.51	2.14	2.88	0.19	0.37	HDL - Ultra
	mg/dl	96.9	82.6	111	7.15	14.30	
	mmol/l	3.28	2.78	3.78	0.25	0.50	Direct HDL Roche 4th Generation
	mg/dl	127	107	147	10.00	20.00	
Immunoglobulin A	g/l	1.44	1.08	1.80	0.18	0.36	Immunoturbidimetric
	mg/dl	144	108	180	18.00	36.00	
Immunoglobulin G	g/l	7.35	6.03	8.67	0.66	1.32	Immunoturbidimetric
	mg/dl	735	603	867	66.00	132.00	
Immunoglobulin M	g/l	0.83	0.67	1.00	0.08	0.17	Immunoturbidimetric
	mg/dl	83.1	66.5	99.7	8.30	16.60	
Iron	µmol/l	40.2	33.0	47.4	3.60	7.20	Colorimetric with ppt.
	µg/dl	225	184	266	20.50	41.00	
	µmol/l	40.5	33.2	47.8	3.65	7.30	Colorimetric without ppt.
	µg/dl	226	186	266	20.00	40.00	
	µmol/l	39.4	32.3	46.5	3.55	7.10	Ortho Vitros Microslide Systems
	µg/dl	220	181	259	19.50	39.00	
Lactate	mmol/l	5.43	4.45	6.41	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	48.9	40.1	57.7	4.40	8.80	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	5.16	4.23	6.09	0.47	0.93	Ortho Vitros Microslide Systems
	mg/dl	46.5	38.1	54.9	4.20	8.40	
	mmol/l	5.37	4.40	6.34	0.49	0.97	Ion selective electrode
	mg/dl	48.4	39.6	57.2	4.40	8.80	
	mmol/l	5.56	4.56	6.56	0.50	1.00	UV LDH
	mg/dl	50.1	41.1	59.1	4.50	9.00	
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	987	839	1135	74.00	148.00	Ortho Vitros Microslide Systems 37°C
	U/l	730	620	840	55.00	110.00	P->L Scandinavian & Dutch 37°C
	U/l	527	448	606	39.50	79.00	P->L Scandinavian & Dutch 30°C
	U/l	370	314	426	28.00	56.00	P->L Scandinavian & Dutch 25°C
	U/l	700	595	805	52.50	105.00	P->L German methods 37°C
	U/l	505	430	580	37.50	75.00	P->L German methods 30°C
	U/l	355	302	408	26.50	53.00	P->L German methods 25°C
	U/l	711	604	818	53.50	107.00	P->L SFBC 37°C
	U/l	513	436	590	38.50	77.00	P->L SFBC 30°C
	U/l	360	306	414	27.00	54.00	P->L SFBC 25°C
	U/l	366	311	421	27.50	55.00	L->P IFCC 37°C
	U/l	264	225	303	19.50	39.00	L->P IFCC 30°C
	U/l	186	158	214	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	65	52	78	6.50	13.00	Other Colorimetric 37°C
	U/l	815	653	977	81.00	162.00	Ortho Vitros Microslide Systems 37°C
	U/l	56	45	67	5.50	11.00	Roche Colorimetric 37°C
	U/l	87	70	104	8.50	17.00	Randox Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	2.46	2.17	2.75	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.71	1.51	1.91	0.10	0.20	
	mmol/l	1.97	1.73	2.21	0.12	0.24	Flame photometry
	mg/dl	1.37	1.20	1.54	0.09	0.17	
	mmol/l	1.99	1.75	2.23	0.12	0.24	Ion selective electrode
	mg/dl	1.38	1.22	1.54	0.08	0.16	
	mmol/l	1.98	1.74	2.22	0.12	0.24	Spectrophotometric
	mg/dl	1.37	1.21	1.53	0.08	0.16	
	mmol/l	2.02	1.78	2.26	0.12	0.24	Randox Colorimetric
	mg/dl	1.40	1.24	1.56	0.08	0.16	
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Arsenazo III
	mg/dl	4.01	3.52	4.50	0.25	0.49	
	mmol/l	1.72	1.52	1.92	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	4.18	3.69	4.67	0.25	0.49	
	mmol/l	1.68	1.47	1.89	0.11	0.21	Atomic absorption
	mg/dl	4.08	3.57	4.59	0.26	0.51	
	mmol/l	1.61	1.41	1.81	0.10	0.20	Calmagite
	mg/dl	3.91	3.43	4.39	0.24	0.48	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
	mmol/l	1.65	1.46	1.84	0.10	0.19	Methylthymol blue
	mg/dl	4.01	3.55	4.47	0.23	0.46	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Enzymatic
	mg/dl	4.03	3.55	4.51	0.24	0.48	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
NEFA	mmol/l	0.44	0.37	0.50	0.03	0.07	Colorimetric
Osmolality	mOsm/kg	349	279	419	35.00	70.00	Calculated
	mOsm/kg	385	308	462	38.50	77.00	Freezing point depression
Paracetamol	mmol/l	0.62	0.50	0.74	0.06	0.12	Colorimetric
	mg/l	93.7	74.9	113	9.40	18.80	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.79	5.77	7.81	0.51	1.02	
	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.23	5.73	6.73	0.25	0.50	Ortho Vitros Microslide Systems
	mmol/l	6.37	5.86	6.88	0.26	0.51	Enzymatic
	mmol/l	6.09	5.61	6.57	0.24	0.48	Flame photometry
	mmol/l	6.17	5.68	6.66	0.25	0.49	ISE method - direct
	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - indirect
	mmol/l	6.57	6.05	7.09	0.26	0.52	Optical Fluorescence
	mmol/l	5.54	5.10	5.98	0.22	0.44	Colorimetric
Protein Total	g/l	49.8	39.9	59.7	4.95	9.90	Ortho Vitros Microslide Systems
	g/dl	4.98	3.99	5.97	0.50	0.99	
	g/l	48.7	38.9	58.5	4.90	9.80	Biuret reaction end point
	g/dl	4.87	3.89	5.85	0.49	0.98	
	g/l	48.3	38.7	57.9	4.80	9.60	Biuret reaction kinetic
	g/dl	4.83	3.87	5.79	0.48	0.96	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	22.0	16.5	27.5	2.75	5.50	Siemens Immulite 1000
	ng/ml =	35.7	26.8	44.6	4.45	8.90	Roche Elecsys Modular E170
	ng/ml =	40.6	30.5	50.7	5.05	10.10	Beckman Access standardised to Hybritech
	ng/ml =	35.1	26.3	43.9	4.40	8.80	Siemens Centaur XP/XPT/Classic
	ng/ml =	24.3	18.2	30.4	3.05	6.10	Siemens Immulite 2000 1st Generation
	ng/ml =	31.1	23.3	38.9	3.90	7.80	Abbott Architect
	ng/ml =	34.9	26.2	43.6	4.35	8.70	Ortho Vitros ECi
	ng/ml =	29.1	21.8	36.4	3.65	7.30	Siemens Dimension
	ng/ml =	37.8	28.3	47.3	4.75	9.50	Cobas E411
	ng/ml =	37.3	28.0	46.6	4.65	9.30	Roche Cobas 6000/8000
	ng/ml =	35.7	26.8	44.6	4.45	8.90	Ortho Vitros 3600/5600/ECi PSA II
Salicylate	mmol/l	0.87	0.70	1.04	0.09	0.17	Gravimetric
	mg/dl	12.0	9.59	14.4	1.21	2.41	
Sodium	mmol/l	156	148	164	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	158	150	166	4.00	8.00	Enzymatic
	mmol/l	159	151	167	4.00	8.00	Flame photometry
	mmol/l	158	150	166	4.00	8.00	ISE method - direct
	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
	mmol/l	160	152	168	4.00	8.00	Optical Fluorescence
	mmol/l	149	142	156	3.50	7.00	Colorimetric
Theophylline	µmol/l	139	111	166	13.85	27.70	Gravimetric
	µg/ml	25.0	20.0	30.0	2.50	5.00	
Thyroid Stimulating Hormone	µU/ml =	0.86	0.69	1.03	0.09	0.17	Abbott Architect
	µU/ml =	1.13	0.90	1.36	0.11	0.23	bioMerieux VIDAS TSH
	µU/ml =	1.14	0.92	1.37	0.11	0.23	bioMerieux VIDAS TSH3 Ultrasensitive

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.13	0.91	1.36	0.11	0.23	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.14	0.91	1.37	0.11	0.23	Siemens Immulite 2000/2500
	µU/ml =	1.23	0.99	1.47	0.12	0.24	Roche Elecsys
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Diasorin Liaison
	µU/ml =	1.01	0.81	1.21	0.10	0.20	Beckman Access Fast TSH
	µU/ml =	1.01	0.81	1.22	0.10	0.21	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.06	0.85	1.27	0.11	0.21	Vitros ECi
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Roche Cobas E411
	µU/ml =	1.24	0.99	1.49	0.12	0.25	Roche Cobas 6000/8000
	µU/ml =	0.95	0.76	1.13	0.09	0.19	Beckman DxI800 Hyper TSH
	µU/ml =	1.02	0.81	1.23	0.10	0.21	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.23	0.98	1.48	0.12	0.25	SNIBE Maglumi Analysers
	µU/ml =	1.01	0.81	1.21	0.10	0.20	Siemens Centaur CP TSH3-Ultra
	µU/ml =	1.00	0.80	1.19	0.10	0.20	Beckman DxI 600/800 Access (3rd IS)
TIBC	µmol/l	38.4	30.3	46.5	4.05	8.10	Removal of excess free iron
	µg/dl	215	169	261	23.00	46.00	
	µmol/l	42.7	33.7	51.7	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	239	188	290	25.50	51.00	
	µmol/l	39.6	31.3	47.9	4.15	8.30	Direct Colorimetric
	µg/dl	221	175	267	23.00	46.00	
	µmol/l	44.1	34.8	53.4	4.65	9.30	Randox Direct
	µg/dl	247	195	299	26.00	52.00	
Tobramycin	µmol/l	15.6	12.5	18.7	1.55	3.10	Gravimetric
	µg/ml	7.30	5.85	8.75	0.73	1.45	
Total T3	nmol/l	3.21	2.41	4.01	0.40	0.80	Abbott Architect
	ng/ml	2.09	1.57	2.61	0.26	0.52	
	ng/dl	209	157	261	26.00	52.00	Abbott Architect

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	3.93	2.95	4.91	0.49	0.98	BioMerieux Vidas
	ng/ml	2.56	1.92	3.20	0.32	0.64	
	ng/dl	256	192	320	32.00	64.00	BioMerieux Vidas
	nmol/l	4.79	3.59	5.99	0.60	1.20	Siemens Centaur XP/XPT/Classic
	ng/ml	3.12	2.34	3.90	0.39	0.78	
	ng/dl	312	234	390	39.00	78.00	Siemens Centaur XP/XPT/Classic
	nmol/l	4.15	3.11	5.19	0.52	1.04	Siemens Immulite 2000/2500
	ng/ml	2.70	2.02	3.38	0.34	0.68	
	ng/dl	270	202	338	34.00	68.00	Siemens Immulite 2000/2500
	nmol/l	4.58	3.44	5.72	0.57	1.14	Siemens Immulite 1000
	ng/ml	2.98	2.24	3.72	0.37	0.74	
	ng/dl	298	224	372	37.00	74.00	Siemens Immulite 1000
	nmol/l	3.88	2.91	4.85	0.49	0.97	Beckman DxI800
	ng/ml	2.53	1.89	3.17	0.32	0.64	
	ng/dl	253	189	317	32.00	64.00	Beckman DxI800
	nmol/l	4.04	3.03	5.05	0.51	1.01	Beckman Access
	ng/ml	2.63	1.97	3.29	0.33	0.66	
	ng/dl	263	197	329	33.00	66.00	Beckman Access
	nmol/l	3.78	2.83	4.73	0.48	0.95	Tosoh Series
	ng/ml	2.46	1.84	3.08	0.31	0.62	
	ng/dl	246	184	308	31.00	62.00	Tosoh Series
	nmol/l	6.09	4.57	7.61	0.76	1.52	Vitros ECi
	ng/ml	3.96	2.98	4.94	0.49	0.98	
	ng/dl	396	298	494	49.00	98.00	Vitros ECi

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	4.45	3.34	5.56	0.56	1.11	Roche Cobas E411
	ng/ml	2.90	2.17	3.63	0.37	0.73	
	ng/dl	290	217	363	36.50	73.00	Roche Cobas E411
	nmol/l	4.26	3.20	5.32	0.53	1.06	Roche Cobas 6000/8000
	ng/ml	2.77	2.08	3.46	0.35	0.69	
	ng/dl	277	208	346	34.50	69.00	Roche Cobas 6000/8000
	nmol/l	5.32	3.99	6.65	0.67	1.33	SNIBE Maglumi Analysers
	ng/ml	3.46	2.60	4.32	0.43	0.86	
	ng/dl	346	260	432	43.00	86.00	SNIBE Maglumi Analysers
	nmol/l	4.93	3.70	6.16	0.62	1.23	Siemens Centaur CP
	ng/ml	3.21	2.41	4.01	0.40	0.80	
	ng/dl	321	241	401	40.00	80.00	Siemens Centaur CP
Total T4	nmol/l	230	173	287	28.50	57.00	Abbott Architect
	µg/dl	17.9	13.5	22.3	2.20	4.40	
	ng/ml	179	135	223	22.00	44.00	Abbott Architect
	nmol/l	228	171	285	28.50	57.00	BioMerieux Vidas
	µg/dl	17.8	13.3	22.3	2.25	4.50	
	ng/ml	178	133	223	22.50	45.00	BioMerieux Vidas
	nmol/l	237	178	296	29.50	59.00	Siemens Centaur XP/XPT/Classic
	µg/dl	18.5	13.9	23.1	2.30	4.60	
	ng/ml	185	139	231	23.00	46.00	Siemens Centaur XP/XPT/Classic
	nmol/l	226	169	283	28.50	57.00	Siemens Immulite 2000/2500
	µg/dl	17.6	13.2	22.0	2.20	4.40	
	ng/ml	176	132	220	22.00	44.00	Siemens Immulite 2000/2500

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	214	160	268	27.00	54.00	Roche Elecsys
	µg/dl	16.7	12.5	20.9	2.10	4.20	
	ng/ml	167	125	209	21.00	42.00	Roche Elecsys
	nmol/l	246	185	307	30.50	61.00	Beckman Access
	µg/dl	19.2	14.4	24.0	2.40	4.80	
	ng/ml	192	144	240	24.00	48.00	Beckman Access
	nmol/l	243	182	304	30.50	61.00	Vitros ECi
	µg/dl	19.0	14.2	23.8	2.40	4.80	
	ng/ml	190	142	238	24.00	48.00	Vitros ECi
	nmol/l	205	154	256	25.50	51.00	Roche Cobas E411
	µg/dl	16.0	12.0	20.0	2.00	4.00	
	ng/ml	160	120	200	20.00	40.00	Roche Cobas E411
	nmol/l	203	152	254	25.50	51.00	Roche Cobas 6000/8000
	µg/dl	15.8	11.9	19.7	1.95	3.90	
	ng/ml	158	119	197	19.50	39.00	Roche Cobas 6000/8000
	nmol/l	211	158	264	26.50	53.00	SNIBE Maglumi Analysers
	µg/dl	16.5	12.3	20.7	2.10	4.20	
	ng/ml	165	123	207	21.00	42.00	SNIBE Maglumi Analysers
	nmol/l	239	179	299	30.00	60.00	Siemens Centaur CP
	µg/dl	18.6	14.0	23.2	2.30	4.60	
	ng/ml	186	140	232	23.00	46.00	Siemens Centaur CP
Transferrin	g/l	1.68	1.34	2.02	0.17	0.34	Immunoturbidimetric
	mg/dl	168	134	202	17.00	34.00	
Triglycerides	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	247	207	287	20.00	40.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.78	2.34	3.22	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	246	207	285	19.50	39.00	
	mmol/l	2.79	2.35	3.23	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	247	208	286	19.50	39.00	
	mmol/l	2.74	2.30	3.18	0.22	0.44	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	242	204	280	19.00	38.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	3.12	2.62	3.62	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	276	232	320	22.00	44.00	
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Ortho Vitros Microslide Systems
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	20.8	17.7	23.9	1.55	3.10	Urease end point
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	21.0	17.8	24.2	1.60	3.20	Urease kinetic
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease hypochlorite
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	21.0	17.9	24.1	1.55	3.10	BUN
	mg/dl	58.9	50.1	67.7	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.82	7.68	9.96	0.57	1.14	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.29	8.10	10.5	0.60	1.19	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Reduction methods
	mg/dl	9.51	8.27	10.8	0.62	1.24	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	8.01	10.4	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.22	8.03	10.4	0.60	1.19	
Vitamin B12	pmol/l	243	194	292	24.50	49.00	Roche Cobas E411
	pg/ml	329	263	395	33.00	66.00	
Zinc	µmol/l	35.7	28.5	42.9	3.60	7.20	Atomic absorption
	µg/dl	233	186	280	23.50	47.00	
	µmol/l	36.0	28.8	43.2	3.60	7.20	Colorimetric with deproteinisation
	µg/dl	235	188	282	23.50	47.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin (electrophoresis)		55.1	49.6	60.6	2.75	5.50	% of total Protein (Beckman Capillary)
alpha-1-globulin		7.7	5.9	9.6	0.93	1.85	% of total Protein (Beckman Capillary)
alpha-2-globulin		14.1	10.7	17.5	1.70	3.40	% of total Protein (Beckman Capillary)
beta-globulin		10.6	8.1	13.1	1.27	2.54	% of total Protein (Beckman Capillary)
gamma-globulin		12.5	9.5	15.5	1.50	3.00	% of total Protein (Beckman Capillary)

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.0	27.2	36.8	2.40	4.80	Bromocresol Green
	g/dl	3.20	2.72	3.68	0.24	0.48	
Alkaline Phosphatase	U/l	313	266	360	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	244	207	281	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	200	170	230	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	153	122	184	15.50	31.00	Tris buffer without P5P 37°C
	U/l	113	90	136	11.50	23.00	Tris buffer without P5P 30°C
	U/l	86	69	103	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	80	122	10.50	21.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
Bilirubin Total	µmol/l	89.0	70.3	108	9.35	18.70	Diazo with Dichloroaniline (DCA)
	mg/dl	5.21	4.11	6.31	0.55	1.10	
	µmol/l	90.3	71.3	109	9.50	19.00	Diazo with Sulphanilic Acid
	mg/dl	5.28	4.17	6.39	0.56	1.11	
	µmol/l	90.4	71.4	109	9.50	19.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.29	4.18	6.40	0.56	1.11	
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Ion selective electrode
	mg/dl	12.5	11.2	13.8	0.65	1.30	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	
Cholesterol	mmol/l	7.09	6.17	8.01	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
CK Total	U/l	491	403	579	44.00	88.00	CK-NAC (IFCC) 37°C
	U/l	307	252	362	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	360	288	432	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	371	297	445	37.00	74.00	Creatinine PAP method
	mg/dl	4.19	3.36	5.02	0.42	0.83	
	µmol/l	355	284	426	35.50	71.00	Jaffe rate blanked
	mg/dl	4.01	3.21	4.81	0.40	0.80	
	µmol/l	386	309	463	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	332	266	398	33.00	66.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.75	3.01	4.49	0.37	0.74	
gamma-GT	U/l	171	145	197	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	135	114	156	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	89	123	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	171	145	197	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	135	114	156	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	106	89	123	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.49	2.12	2.86	0.19	0.37	Direct Clearance Method
	mg/dl	96.1	81.8	110	7.15	14.30	
Iron	µmol/l	39.2	32.2	46.2	3.50	7.00	Colorimetric without ppt.
	µg/dl	219	180	258	19.50	39.00	
Lactate	mmol/l	5.49	4.50	6.48	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.5	40.5	58.5	4.50	9.00	
LD (LDH)	U/l	718	610	826	54.00	108.00	P->L German methods 37°C
	U/l	518	440	596	39.00	78.00	P->L German methods 30°C
	U/l	364	309	419	27.50	55.00	P->L German methods 25°C
	U/l	364	310	418	27.00	54.00	L->P IFCC 37°C
	U/l	263	224	302	19.50	39.00	L->P IFCC 30°C
	U/l	185	157	213	14.00	28.00	L->P IFCC 25°C
Magnesium	mmol/l	1.56	1.37	1.75	0.10	0.19	Xylidyl Blue
	mg/dl	3.79	3.33	4.25	0.23	0.46	
Phosphate Inorganic	mmol/l	2.05	1.74	2.36	0.16	0.31	Phosphomolybdate enzymatic
	mg/dl	6.36	5.39	7.33	0.49	0.97	
	mmol/l	2.10	1.79	2.41	0.16	0.31	Phosphomolybdate UV
	mg/dl	6.51	5.55	7.47	0.48	0.96	
Protein Total	g/l	49.5	39.6	59.4	4.95	9.90	Biuret reaction end point
	g/dl	4.95	3.96	5.94	0.50	0.99	
	g/l	50.7	40.6	60.8	5.05	10.10	Biuret reaction kinetic
	g/dl	5.07	4.06	6.08	0.51	1.01	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.74	2.30	3.18	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	242	204	280	19.00	38.00	
	mmol/l	2.74	2.30	3.18	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	242	204	280	19.00	38.00	
	mmol/l	2.75	2.31	3.19	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	243	204	282	19.50	39.00	
	mmol/l	2.70	2.27	3.13	0.22	0.43	Lipase/Glycerol Dehydrogenase
	mg/dl	239	201	277	19.00	38.00	
Urea	mmol/l	21.1	17.9	24.3	1.60	3.20	Urease end point
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	21.0	17.9	24.1	1.55	3.10	Urease kinetic
	mg/dl	126	108	144	9.00	18.00	
	mmol/l	21.6	18.3	24.9	1.65	3.30	Urease hypochlorite
	mg/dl	130	110	150	10.00	20.00	
	mmol/l	21.0	17.9	24.1	1.55	3.10	BUN
	mg/dl	58.9	50.1	67.7	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.07	7.88	10.3	0.60	1.19	

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RANDOX

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Ortho Vitros Microslide Systems
	g/dl	3.01	2.56	3.46	0.23	0.45	
Alkaline Phosphatase	U/l	241	204	278	18.50	37.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	157	126	188	15.50	31.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	186	158	214	14.00	28.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	193	155	231	19.00	38.00	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	81.8	64.7	98.9	8.55	17.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.79	3.78	5.80	0.51	1.01	
Bilirubin, Unconjugated Vitros BU	µmol/l	76.0	60.0	92.0	8.00	16.00	BuBc Vitros Slide
	mg/dl	4.45	3.51	5.39	0.47	0.94	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	121	111	131	5.00	10.00	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	6.73	5.85	7.61	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	260	226	294	17.00	34.00	
Cholinesterase	U/l	5120	4096	6144	512.00	1024.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	407	333	481	37.00	74.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	402	322	482	40.00	80.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.54	3.64	5.44	0.45	0.90	
	µmol/l	401	321	481	40.00	80.00	Vitros IDMS Traceable
	mg/dl	4.53	3.63	5.43	0.45	0.90	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	89.4	67.0	112	11.20	22.40	Vitros ECi
	ng/dl	6.97	5.23	8.71	0.87	1.74	
	pg/ml	69.7	52.3	87.1	8.70	17.40	Vitros ECi
gamma-GT	U/l	203	173	233	15.00	30.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.8	12.6	17.0	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	267	227	307	20.00	40.00	
HDL - Cholesterol	mmol/l	2.32	1.97	2.67	0.18	0.35	Vitros Magnetic HDL
	mg/dl	89.6	76.0	103	6.80	13.60	
	mmol/l	2.22	1.89	2.55	0.17	0.33	Vitros 5.1 FS microtip assay
	mg/dl	85.7	73.0	98.4	6.35	12.70	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	84.9	72.2	97.6	6.35	12.70	
Iron	µmol/l	39.4	32.3	46.5	3.55	7.10	Ortho Vitros Microslide Systems
	µg/dl	220	181	259	19.50	39.00	
Lactate	mmol/l	5.16	4.23	6.09	0.47	0.93	Ortho Vitros Microslide Systems
	mg/dl	46.5	38.1	54.9	4.20	8.40	
LD (LDH)	U/l	987	839	1135	74.00	148.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	815	653	977	81.00	162.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.46	2.17	2.75	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.71	1.51	1.91	0.10	0.20	
Magnesium	mmol/l	1.72	1.52	1.92	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	4.18	3.69	4.67	0.25	0.49	
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.85	5.83	7.87	0.51	1.02	

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.23	5.73	6.73	0.25	0.50	Ortho Vitros Microslide Systems
Protein Total	g/l	49.8	39.9	59.7	4.95	9.90	Ortho Vitros Microslide Systems
	g/dl	4.98	3.99	5.97	0.50	0.99	
PSA Total	ng/ml =	34.9	26.2	43.6	4.35	8.70	Ortho Vitros ECi
	ng/ml =	35.7	26.8	44.6	4.45	8.90	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	156	148	164	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.06	0.85	1.27	0.11	0.21	Vitros ECi
Total T3	nmol/l	6.09	4.57	7.61	0.76	1.52	Vitros ECi
	ng/ml	3.96	2.98	4.94	0.49	0.98	
	ng/dl	396	298	494	49.00	98.00	Vitros ECi
Total T4	nmol/l	243	182	304	30.50	61.00	Vitros ECi
	µg/dl	19.0	14.2	23.8	2.40	4.80	
	ng/ml	190	142	238	24.00	48.00	Vitros ECi
Triglycerides	mmol/l	3.12	2.62	3.62	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	276	232	320	22.00	44.00	
Urea	mmol/l	19.6	16.7	22.5	1.45	2.90	Ortho Vitros Microslide Systems
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.82	7.68	9.96	0.57	1.14	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.0	27.2	36.8	2.40	4.80	Bromocresol Green
	g/dl	3.20	2.72	3.68	0.24	0.48	
ALT (GPT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	114	91	137	11.50	23.00	Tris buffer without P5P 30°C
	U/l	87	69	105	9.00	18.00	Tris buffer without P5P 25°C
Amylase Total	U/l	299	254	344	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	30.5	24.1	36.9	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.41	2.15	0.19	0.37	
Bilirubin Total	µmol/l	86.7	68.5	105	9.10	18.20	Diazo with Dichloroaniline (DCA)
	mg/dl	5.07	4.01	6.13	0.53	1.06	
	µmol/l	85.9	67.8	104	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.03	3.97	6.09	0.53	1.06	
	µmol/l	91.4	72.2	111	9.60	19.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.35	4.22	6.48	0.57	1.13	
	µmol/l	99.9	78.9	121	10.50	21.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.84	4.62	7.06	0.61	1.22	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Cholesterol	mmol/l	7.22	6.28	8.16	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	242	316	18.50	37.00	
CK Total	U/l	521	427	615	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	326	267	385	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	348	279	417	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.93	3.15	4.71	0.39	0.78	
	µmol/l	351	281	421	35.00	70.00	Jaffe rate blanked
	mg/dl	3.97	3.18	4.76	0.40	0.79	
gamma-GT	U/l	172	146	198	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	136	115	157	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	90	122	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	177	150	204	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	118	160	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
Iron	µmol/l	38.3	31.4	45.2	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	176	252	19.00	38.00	
Lactate	mmol/l	5.31	4.35	6.27	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	47.8	39.2	56.4	4.30	8.60	
LD (LDH)	U/l	716	609	823	53.50	107.00	P->L German methods 37°C
	U/l	517	440	594	38.50	77.00	P->L German methods 30°C
	U/l	363	309	417	27.00	54.00	P->L German methods 25°C

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	71	57	85	7.00	14.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.48	1.31	1.65	0.09	0.17	Xylidyl Blue
	mg/dl	3.60	3.18	4.02	0.21	0.42	
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	
Protein Total	g/l	49.7	39.8	59.6	4.95	9.90	Biuret reaction end point
	g/dl	4.97	3.98	5.96	0.50	0.99	
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
	mmol/l	2.76	2.32	3.20	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	244	205	283	19.50	39.00	
Urea	mmol/l	20.8	17.7	23.9	1.55	3.10	Urease kinetic
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	20.8	17.7	23.9	1.55	3.10	BUN
	mg/dl	58.4	49.6	67.2	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.71	8.45	11.0	0.63	1.26	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.04	7.86	10.2	0.59	1.18	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (Total)	U/l	62.9	42.2	83.6	10.35	20.70	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	32.5	27.7	37.3	2.40	4.80	Bromocresol Green
	g/dl	3.25	2.77	3.73	0.24	0.48	
	g/l	31.9	27.1	36.7	2.40	4.80	Bromocresol Purple
	g/dl	3.19	2.71	3.67	0.24	0.48	
	g/l	27.3	23.2	31.4	2.05	4.10	Turbidimetric Assays
	g/dl	2.73	2.32	3.14	0.21	0.41	
Alkaline Phosphatase	U/l	249	212	286	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	194	165	223	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	159	135	183	12.00	24.00	Roche Integra AMP buffer 25°C
	U/l	248	211	285	18.50	37.00	AMP optimised to IFCC 37°C
	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 30°C
	U/l	158	135	181	11.50	23.00	AMP optimised to IFCC 25°C
	U/l	254	216	292	19.00	38.00	Colorimetric 37°C
	U/l	198	168	228	15.00	30.00	Colorimetric 30°C
	U/l	162	138	186	12.00	24.00	Colorimetric 25°C
ALT (GPT)	U/l	143	115	171	14.00	28.00	Tris buffer without P5P 37°C
	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 30°C
	U/l	81	65	97	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	252	214	290	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	244	207	281	18.50	37.00	Roche EPS Liquid 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	270	229	311	20.50	41.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	266	226	306	20.00	40.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	269	229	309	20.00	40.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	269	229	309	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	266	226	306	20.00	40.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Colorimetric
	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bile Acids	µmol/l	45.5	36.4	54.6	4.55	9.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	30.8	24.4	37.2	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.80	1.43	2.17	0.19	0.37	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Roche JG factored
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	30.5	24.1	36.9	3.20	6.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.78	1.41	2.15	0.19	0.37	
Bilirubin Total	µmol/l	82.6	65.2	100	8.70	17.40	Diazo with Dichloroaniline (DCA)
	mg/dl	4.83	3.81	5.85	0.51	1.02	
	µmol/l	81.2	64.1	98.3	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.75	3.75	5.75	0.50	1.00	
	µmol/l	81.4	64.3	98.5	8.55	17.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.76	3.76	5.76	0.50	1.00	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	80.0	63.2	96.8	8.40	16.80	Nitrobenzenediazonium salt
	mg/dl	4.68	3.70	5.66	0.49	0.98	
	µmol/l	81.9	64.7	99.1	8.60	17.20	Diazonium ion
	mg/dl	4.79	3.78	5.80	0.51	1.01	
Calcium	mmol/l	3.13	2.81	3.45	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.15	2.83	3.47	0.16	0.32	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.14	2.82	3.46	0.16	0.32	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.82	5.93	7.71	0.45	0.89	Cholesterol Oxidase
	mg/dl	263	229	297	17.00	34.00	
Cholinesterase	U/l	5302	4242	6362	530.00	1060.00	Colorimetric Benzoylcholine 37°C
	U/l	5286	4229	6343	528.50	1057.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	464	381	547	41.50	83.00	CK-NAC serum start (DGKC) 37°C
	U/l	290	239	341	25.50	51.00	CK-NAC serum start (DGKC) 30°C
	U/l	197	162	232	17.50	35.00	CK-NAC serum start (DGKC) 25°C
	U/l	463	380	546	41.50	83.00	CK-NAC substrate start (DGKC) 37°C
	U/l	290	238	342	26.00	52.00	CK-NAC substrate start (DGKC) 30°C
	U/l	197	162	232	17.50	35.00	CK-NAC substrate start (DGKC) 25°C
	U/l	463	380	546	41.50	83.00	CK-NAC (IFCC) 37°C
	U/l	290	238	342	26.00	52.00	CK-NAC (IFCC) 30°C
	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	354	283	425	35.50	71.00	Alkaline picrate with deproteinization
	mg/dl	4.00	3.20	4.80	0.40	0.80	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	385	308	462	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	393	315	471	39.00	78.00	Enzymatic UV method
	mg/dl	4.44	3.56	5.32	0.44	0.88	
	µmol/l	396	316	476	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.47	3.57	5.37	0.45	0.90	
	µmol/l	385	308	462	38.50	77.00	Jaffe rate blanked
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	385	308	462	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	387	309	465	39.00	78.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	401	321	481	40.00	80.00	IDMS traceable
	mg/dl	4.53	3.63	5.43	0.45	0.90	
Free T4	pmol/l	78.6	59.0	98.2	9.80	19.60	Roche Cobas 6000/8000
	ng/dl	6.13	4.60	7.66	0.77	1.53	
	pg/ml	61.3	46.0	76.6	7.65	15.30	Roche Cobas 6000/8000
gamma-GT	U/l	159	135	183	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	125	106	144	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	98	83	113	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	177	151	203	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	119	159	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose dehydrogenase
	mg/dl	281	238	324	21.50	43.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	3.08	2.62	3.54	0.23	0.46	Direct HDL Immunoseparation
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	3.24	2.76	3.72	0.24	0.48	Direct HDL PEGME
	mg/dl	125	107	143	9.00	18.00	
	mmol/l	3.26	2.78	3.74	0.24	0.48	Direct HDL Roche 4th Generation
	mg/dl	126	107	145	9.50	19.00	
Iron	µmol/l	41.1	33.7	48.5	3.70	7.40	Colorimetric with ppt.
	µg/dl	230	188	272	21.00	42.00	
	µmol/l	41.4	33.9	48.9	3.75	7.50	Colorimetric without ppt.
	µg/dl	231	190	272	20.50	41.00	
Lactate	mmol/l	5.43	4.46	6.40	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.9	40.2	57.6	4.35	8.70	
LD (LDH)	U/l	368	313	423	27.50	55.00	L->P 37°C
	U/l	266	226	306	20.00	40.00	L->P 30°C
	U/l	187	159	215	14.00	28.00	L->P 25°C
	U/l	677	576	778	50.50	101.00	P->L Scandinavian & Dutch 37°C
	U/l	489	416	562	36.50	73.00	P->L Scandinavian & Dutch 30°C
	U/l	343	292	394	25.50	51.00	P->L Scandinavian & Dutch 25°C
	U/l	683	581	785	51.00	102.00	P->L German methods 37°C
	U/l	493	419	567	37.00	74.00	P->L German methods 30°C
	U/l	346	295	397	25.50	51.00	P->L German methods 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	370	314	426	28.00	56.00	L->P IFCC 37°C
	U/l	267	227	307	20.00	40.00	L->P IFCC 30°C
	U/l	188	159	217	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	55	44	66	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.99	1.75	2.23	0.12	0.24	Ion selective electrode
	mg/dl	1.38	1.22	1.54	0.08	0.16	
	mmol/l	2.00	1.76	2.24	0.12	0.24	Spectrophotometric
	mg/dl	1.39	1.22	1.56	0.09	0.17	
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Arsenazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.65	1.46	1.84	0.10	0.19	Atomic absorption
	mg/dl	4.01	3.55	4.47	0.23	0.46	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Xylidyl Blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Enzymatic
	mg/dl	4.03	3.55	4.51	0.24	0.48	
Osmolality	mOsm/kg	353	282	424	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.79	5.77	7.81	0.51	1.02	
	mmol/l	2.18	1.85	2.51	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.76	5.74	7.78	0.51	1.02	
Potassium	mmol/l	6.31	5.81	6.81	0.25	0.50	ISE method - indirect

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	48.3	38.6	58.0	4.85	9.70	Biuret reaction end point
	g/dl	4.83	3.86	5.80	0.49	0.97	
	g/l	48.7	39.0	58.4	4.85	9.70	Biuret reaction kinetic
	g/dl	4.87	3.90	5.84	0.49	0.97	
PSA Total	ng/ml =	37.3	28.0	46.6	4.65	9.30	Roche Cobas 6000/8000
Sodium	mmol/l	161	152	170	4.50	9.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.22	0.97	1.47	0.12	0.25	Roche Elecsys
	µU/ml =	1.24	0.99	1.49	0.12	0.25	Roche Cobas 6000/8000
TIBC	µmol/l	42.7	33.7	51.7	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	239	188	290	25.50	51.00	
	µmol/l	40.0	31.6	48.4	4.20	8.40	Direct Colorimetric
	µg/dl	224	177	271	23.50	47.00	
	µmol/l	45.1	35.6	54.6	4.75	9.50	Calculated from Transferrin
	µg/dl	252	199	305	26.50	53.00	
Total T3	nmol/l	4.26	3.20	5.32	0.53	1.06	Roche Cobas 6000/8000
	ng/ml	2.77	2.08	3.46	0.35	0.69	
	ng/dl	277	208	346	34.50	69.00	Roche Cobas 6000/8000
Total T4	nmol/l	203	152	254	25.50	51.00	Roche Cobas 6000/8000
	µg/dl	15.8	11.9	19.7	1.95	3.90	
	ng/ml	158	119	197	19.50	39.00	Roche Cobas 6000/8000
Triglycerides	mmol/l	2.79	2.35	3.23	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	247	208	286	19.50	39.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	247	207	287	20.00	40.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.80	2.36	3.24	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	248	209	287	19.50	39.00	
Urea	mmol/l	21.2	18.0	24.4	1.60	3.20	Urease end point
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	21.0	17.8	24.2	1.60	3.20	Urease kinetic
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	21.0	17.9	24.1	1.55	3.10	BUN
	mg/dl	58.9	50.1	67.7	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.24	8.05	10.4	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.07	7.90	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.06	7.88	10.2	0.59	1.18	
Zinc	µmol/l	35.2	28.1	42.3	3.55	7.10	Colorimetric with deproteinisation
	µg/dl	230	183	277	23.50	47.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.3	27.5	37.1	2.40	4.80	Bromocresol Green
	g/dl	3.23	2.75	3.71	0.24	0.48	
	g/l	30.2	25.6	34.8	2.30	4.60	Bromocresol Purple
	g/dl	3.02	2.56	3.48	0.23	0.46	
Alkaline Phosphatase	U/l	256	218	294	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	199	170	228	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	164	139	189	12.50	25.00	Roche Integra AMP buffer 25°C
	U/l	239	203	275	18.00	36.00	AMP optimised to IFCC 37°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 30°C
	U/l	153	130	176	11.50	23.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	139	112	166	13.50	27.00	Tris buffer without P5P 37°C
	U/l	103	83	123	10.00	20.00	Tris buffer without P5P 30°C
	U/l	78	63	93	7.50	15.00	Tris buffer without P5P 25°C
Amylase Total	U/l	281	239	323	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	276	235	317	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	32.9	26.0	39.8	3.45	6.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.92	1.52	2.32	0.20	0.40	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	31.1	24.5	37.7	3.30	6.60	Roche JG factored
	mg/dl	1.82	1.43	2.21	0.20	0.39	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Bilirubin Total	µmol/l	79.8	63.0	96.6	8.40	16.80	Diazo with Sulphanilic Acid
	mg/dl	4.67	3.69	5.65	0.49	0.98	
	µmol/l	76.7	60.6	92.8	8.05	16.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.49	3.55	5.43	0.47	0.94	
	µmol/l	78.4	61.9	94.9	8.25	16.50	Diazonium ion
	mg/dl	4.59	3.62	5.56	0.49	0.97	
Calcium	mmol/l	3.16	2.84	3.48	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.17	2.86	3.48	0.16	0.31	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	120	110	130	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.92	6.02	7.82	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	232	302	17.50	35.00	
CK Total	U/l	459	377	541	41.00	82.00	CK-NAC (IFCC) 37°C
	U/l	287	236	338	25.50	51.00	CK-NAC (IFCC) 30°C
	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	374	299	449	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.23	3.38	5.08	0.43	0.85	

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	380	304	456	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	373	299	447	37.00	74.00	Jaffe rate blanked
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	359	287	431	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.06	3.24	4.88	0.41	0.82	
	µmol/l	366	293	439	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.14	3.31	4.97	0.42	0.83	
gamma-GT	U/l	166	141	191	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	131	111	151	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	102	87	117	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
HDL - Cholesterol	mmol/l	3.39	2.88	3.90	0.26	0.51	Direct HDL Roche 4th Generation
	mg/dl	131	111	151	10.00	20.00	
Iron	µmol/l	41.7	34.2	49.2	3.75	7.50	Colorimetric without ppt.
	µg/dl	233	191	275	21.00	42.00	
LD (LDH)	U/l	376	319	433	28.50	57.00	L->P IFCC 37°C
	U/l	271	230	312	20.50	41.00	L->P IFCC 30°C
	U/l	191	162	220	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	58	47	69	5.50	11.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.70	1.49	1.91	0.11	0.21	Xylidyl Blue
	mg/dl	4.13	3.62	4.64	0.26	0.51	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.98	5.92	8.04	0.53	1.06	
	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	49.7	39.7	59.7	5.00	10.00	Biuret reaction end point
	g/dl	4.97	3.97	5.97	0.50	1.00	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.83	2.37	3.29	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.54	2.14	2.94	0.20	0.40	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	225	189	261	18.00	36.00	
	mmol/l	2.84	2.38	3.30	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	251	211	291	20.00	40.00	
	mmol/l	2.84	2.39	3.29	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	251	212	290	19.50	39.00	
Urea	mmol/l	20.6	17.6	23.6	1.50	3.00	Urease kinetic
	mg/dl	124	106	142	9.00	18.00	
	mmol/l	20.6	17.5	23.7	1.55	3.10	BUN
	mg/dl	57.8	49.1	66.5	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	8.27	10.8	0.62	1.24	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.24	8.03	10.5	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.2	27.4	37.0	2.40	4.80	Bromocresol Green
	g/dl	3.22	2.74	3.70	0.24	0.48	
	g/l	31.9	27.1	36.7	2.40	4.80	Bromocresol Purple
	g/dl	3.19	2.71	3.67	0.24	0.48	
Alkaline Phosphatase	U/l	247	210	284	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	192	164	220	14.00	28.00	Roche Integra AMP buffer 30°C
	U/l	158	134	182	12.00	24.00	Roche Integra AMP buffer 25°C
	U/l	250	213	287	18.50	37.00	AMP optimised to IFCC 37°C
	U/l	195	166	224	14.50	29.00	AMP optimised to IFCC 30°C
	U/l	160	136	184	12.00	24.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
	U/l	106	84	128	11.00	22.00	Tris buffer without P5P 30°C
	U/l	81	64	98	8.50	17.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	264	224	304	20.00	40.00	Immunoinhibition EPS substrate 37°C
	U/l	248	210	286	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	273	232	314	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	272	231	313	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	273	232	314	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	274	233	315	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer without P5P 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	29.3	23.2	35.4	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.71	1.36	2.06	0.18	0.35	
	µmol/l	29.4	23.2	35.6	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.72	1.36	2.08	0.18	0.36	
	µmol/l	29.7	23.4	36.0	3.15	6.30	Roche JG factored
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	30.8	24.3	37.3	3.25	6.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Bilirubin Total	µmol/l	81.9	64.7	99.1	8.60	17.20	Diazo with Dichloroaniline (DCA)
	mg/dl	4.79	3.78	5.80	0.51	1.01	
	µmol/l	81.0	64.0	98.0	8.50	17.00	Diazo with Sulphanilic Acid
	mg/dl	4.74	3.74	5.74	0.50	1.00	
	µmol/l	81.5	64.4	98.6	8.55	17.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.77	3.77	5.77	0.50	1.00	
	µmol/l	82.2	64.9	99.5	8.65	17.30	Diazonium ion
	mg/dl	4.81	3.80	5.82	0.51	1.01	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.13	2.81	3.45	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.15	2.84	3.46	0.16	0.31	NM-BAPTA
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.84	5.95	7.73	0.45	0.89	Cholesterol Oxidase
	mg/dl	264	230	298	17.00	34.00	
Cholinesterase	U/l	5337	4270	6404	533.50	1067.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	465	381	549	42.00	84.00	CK-NAC substrate start (DGKC) 37°C
	U/l	291	239	343	26.00	52.00	CK-NAC substrate start (DGKC) 30°C
	U/l	198	162	234	18.00	36.00	CK-NAC substrate start (DGKC) 25°C
	U/l	468	384	552	42.00	84.00	CK-NAC (IFCC) 37°C
	U/l	293	240	346	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	389	311	467	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.40	3.51	5.29	0.45	0.89	
	µmol/l	392	314	470	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	387	309	465	39.00	78.00	Jaffe rate blanked
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	392	314	470	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	393	314	472	39.50	79.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.44	3.55	5.33	0.45	0.89	
gamma-GT	U/l	164	140	188	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	129	110	148	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	86	116	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	177	150	204	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	118	160	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.82	2.40	3.24	0.21	0.42	Direct HDL Immunoseparation
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	3.28	2.79	3.77	0.25	0.49	Direct HDL PEGME
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	3.22	2.74	3.70	0.24	0.48	Direct HDL Roche 4th Generation
	mg/dl	124	106	142	9.00	18.00	
Iron	µmol/l	41.6	34.1	49.1	3.75	7.50	Colorimetric with ppt.
	µg/dl	233	191	275	21.00	42.00	
	µmol/l	41.1	33.7	48.5	3.70	7.40	Colorimetric without ppt.
	µg/dl	230	188	272	21.00	42.00	
Lactate	mmol/l	5.57	4.57	6.57	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.2	41.2	59.2	4.50	9.00	
LD (LDH)	U/l	376	319	433	28.50	57.00	L->P 37°C
	U/l	271	230	312	20.50	41.00	L->P 30°C
	U/l	191	162	220	14.50	29.00	L->P 25°C
	U/l	668	568	768	50.00	100.00	P->L German methods 37°C
	U/l	482	410	554	36.00	72.00	P->L German methods 30°C
	U/l	339	288	390	25.50	51.00	P->L German methods 25°C
	U/l	372	316	428	28.00	56.00	L->P IFCC 37°C
	U/l	269	228	310	20.50	41.00	L->P IFCC 30°C
	U/l	189	160	218	14.50	29.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	55	44	66	5.50	11.00	Roche Colorimetric 37°C
	U/l	54	43	65	5.50	11.00	Roche Turbidimetric with colipase 37°C
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Atomic absorption
	mg/dl	4.11	3.62	4.60	0.25	0.49	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Xylidyl Blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.03	3.55	4.51	0.24	0.48	
Phosphate Inorganic	mmol/l	2.17	1.85	2.49	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.73	5.74	7.72	0.50	0.99	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.33	5.82	6.84	0.26	0.51	ISE method - indirect
Protein Total	g/l	48.4	38.7	58.1	4.85	9.70	Biuret reaction end point
	g/dl	4.84	3.87	5.81	0.49	0.97	
	g/l	48.4	38.8	58.0	4.80	9.60	Biuret reaction kinetic
	g/dl	4.84	3.88	5.80	0.48	0.96	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	42.1	33.3	50.9	4.40	8.80	FE+UIBC(saturation with iron)
	µg/dl	235	186	284	24.50	49.00	
Triglycerides	mmol/l	2.80	2.36	3.24	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	248	209	287	19.50	39.00	
	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	253	212	294	20.50	41.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	250	210	290	20.00	40.00	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	249	209	289	20.00	40.00	
Urea	mmol/l	20.9	17.8	24.0	1.55	3.10	Urease end point
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	21.2	18.0	24.4	1.60	3.20	Urease kinetic
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	21.2	18.0	24.4	1.60	3.20	BUN
	mg/dl	59.5	50.6	68.4	4.45	8.90	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.22	8.03	10.4	0.60	1.19	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.7	27.8	37.6	2.45	4.90	Bromocresol Green
	g/dl	3.27	2.78	3.76	0.25	0.49	
Alkaline Phosphatase	U/l	237	202	272	17.50	35.00	Roche Integra AMP buffer 37°C
	U/l	185	157	213	14.00	28.00	Roche Integra AMP buffer 30°C
	U/l	151	129	173	11.00	22.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	107	85	129	11.00	22.00	Tris buffer without P5P 30°C
	U/l	81	65	97	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	239	203	275	18.00	36.00	Immunoinhibition EPS substrate 37°C
	U/l	243	207	279	18.00	36.00	Roche EPS Liquid 37°C
Amylase Total	U/l	271	231	311	20.00	40.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	80	118	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.2	11.2	17.2	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	31.5	24.9	38.1	3.30	6.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.84	1.46	2.22	0.19	0.38	
	µmol/l	31.5	24.9	38.1	3.30	6.60	Roche JG factored
	mg/dl	1.84	1.46	2.22	0.19	0.38	
Bilirubin Total	µmol/l	80.1	63.3	96.9	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.69	3.70	5.68	0.50	0.99	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	80.2	63.4	97.0	8.40	16.80	Diazonium ion
	mg/dl	4.69	3.71	5.67	0.49	0.98	
Calcium	mmol/l	3.15	2.84	3.46	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.4	13.8	0.60	1.20	
	mmol/l	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.84	5.95	7.73	0.45	0.89	Cholesterol Oxidase
	mg/dl	264	230	298	17.00	34.00	
Cholinesterase	U/l	5189	4151	6227	519.00	1038.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	456	374	538	41.00	82.00	CK-NAC substrate start (DGKC) 37°C
	U/l	285	234	336	25.50	51.00	CK-NAC substrate start (DGKC) 30°C
	U/l	194	159	229	17.50	35.00	CK-NAC substrate start (DGKC) 25°C
	U/l	457	375	539	41.00	82.00	CK-NAC (IFCC) 37°C
	U/l	286	235	337	25.50	51.00	CK-NAC (IFCC) 30°C
	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	395	316	474	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	390	312	468	39.00	78.00	Jaffe rate blanked
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	390	312	468	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	373	299	447	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	385	308	462	38.50	77.00	IDMS traceable
	mg/dl	4.35	3.48	5.22	0.44	0.87	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	155	132	178	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	122	104	140	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	96	81	111	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	175	149	201	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	138	117	159	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	108	92	124	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	3.24	2.75	3.73	0.25	0.49	Direct HDL Roche 4th Generation
	mg/dl	125	106	144	9.50	19.00	
Iron	µmol/l	40.4	33.1	47.7	3.65	7.30	Colorimetric without ppt.
	µg/dl	226	185	267	20.50	41.00	
Lactate	mmol/l	5.39	4.42	6.36	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.6	39.8	57.4	4.40	8.80	
LD (LDH)	U/l	370	315	425	27.50	55.00	L->P IFCC 37°C
	U/l	267	227	307	20.00	40.00	L->P IFCC 30°C
	U/l	188	160	216	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	53	42	64	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.03	1.79	2.27	0.12	0.24	Spectrophotometric
	mg/dl	1.41	1.24	1.58	0.09	0.17	
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	344	275	413	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.15	1.83	2.47	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.67	5.67	7.67	0.50	1.00	
Potassium	mmol/l	6.35	5.84	6.86	0.26	0.51	ISE method - indirect
Protein Total	g/l	48.2	38.6	57.8	4.80	9.60	Biuret reaction end point
	g/dl	4.82	3.86	5.78	0.48	0.96	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.1	34.1	52.1	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	241	191	291	25.00	50.00	
Triglycerides	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	20.8	17.6	24.0	1.60	3.20	Urease kinetic
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	20.8	17.7	23.9	1.55	3.10	BUN
	mg/dl	58.4	49.6	67.2	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.00	7.83	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.12	7.93	10.3	0.60	1.19	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.60	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.99	7.83	10.2	0.58	1.16	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.0	27.2	36.8	2.40	4.80	Bromocresol Green
	g/dl	3.20	2.72	3.68	0.24	0.48	
Alkaline Phosphatase	U/l	487	414	560	36.50	73.00	Diethanolamine buffer DEA 37°C
	U/l	324	275	373	24.50	49.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Amylase Total	U/l	303	257	349	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	31.0	24.5	37.5	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	31.8	25.1	38.5	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.86	1.47	2.25	0.20	0.39	
Bilirubin Total	µmol/l	91.4	72.2	111	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.35	4.22	6.48	0.57	1.13	
	µmol/l	95.3	75.3	115	10.00	20.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.58	4.41	6.75	0.59	1.17	
Calcium	mmol/l	3.14	2.83	3.45	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	118	108	128	5.00	10.00	ISE direct
Cholesterol	mmol/l	7.36	6.40	8.32	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
CK Total	U/l	515	422	608	46.50	93.00	CK-NAC substrate start (DGKC) 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	556	456	656	50.00	100.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	320	256	384	32.00	64.00	Alkaline picrate no deproteinization
	mg/dl	3.62	2.89	4.35	0.37	0.73	
	µmol/l	396	317	475	39.50	79.00	Enzymatic UV method
	mg/dl	4.47	3.58	5.36	0.45	0.89	
gamma-GT	U/l	188	160	216	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	
	mmol/l	16.4	13.9	18.9	1.25	2.50	Glucose oxidase
	mg/dl	296	250	342	23.00	46.00	
Iron	µmol/l	38.3	31.4	45.2	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	176	252	19.00	38.00	
Lactate	mmol/l	5.40	4.43	6.37	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.7	39.9	57.5	4.40	8.80	
LD (LDH)	U/l	739	628	850	55.50	111.00	P->L German methods 37°C
	U/l	350	298	402	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	87	70	104	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.02	1.78	2.26	0.12	0.24	Colorimetric
	mg/dl	1.40	1.24	1.56	0.08	0.16	
Magnesium	mmol/l	1.65	1.46	1.84	0.10	0.19	Xylidyl Blue
	mg/dl	4.01	3.55	4.47	0.23	0.46	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Potassium	mmol/l	6.37	5.86	6.88	0.26	0.51	Enzymatic
	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - direct

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	48.8	39.0	58.6	4.90	9.80	Biuret reaction end point
	g/dl	4.88	3.90	5.86	0.49	0.98	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - direct
	mmol/l	158	150	166	4.00	8.00	Enzymatic
TIBC	µmol/l	44.1	34.8	53.4	4.65	9.30	Direct Colorimetric
	µg/dl	247	195	299	26.00	52.00	
Triglycerides	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	246	206	286	20.00	40.00	
Urea	mmol/l	21.2	18.0	24.4	1.60	3.20	Urease kinetic
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	21.2	18.0	24.4	1.60	3.20	BUN
	mg/dl	59.5	50.6	68.4	4.45	8.90	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.66	8.40	10.9	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.51	8.28	10.7	0.62	1.23	

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SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.9	26.3	35.5	2.30	4.60	Bromocresol Green
	g/dl	3.09	2.63	3.55	0.23	0.46	
	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Purple
	g/dl	2.99	2.54	3.44	0.23	0.45	
Alkaline Phosphatase	U/l	380	323	437	28.50	57.00	Diethanolamine buffer DEA 37°C
	U/l	272	231	313	20.50	41.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	157	125	189	16.00	32.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	256	218	294	19.00	38.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	290	247	333	21.50	43.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	31.7	25.0	38.4	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Bilirubin Total	µmol/l	101	79.8	122	10.60	21.20	Diazo with Sulphanilic Acid
	mg/dl	5.91	4.67	7.15	0.62	1.24	
	µmol/l	96.3	76.1	117	10.10	20.20	Oxidation to Biliverdin/Vanadate
	mg/dl	5.63	4.45	6.81	0.59	1.18	
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.06	2.75	3.37	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.0	13.6	0.65	1.30	

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	121	111	131	5.00	10.00	ISE indirect
Cholesterol	mmol/l	7.05	6.14	7.96	0.46	0.91	Cholesterol Oxidase
	mg/dl	272	237	307	17.50	35.00	
Cholinesterase	U/l	6181	4944	7418	618.50	1237.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	482	395	569	43.50	87.00	CK-NAC substrate start (DGKC) 37°C
	U/l	488	400	576	44.00	88.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	364	291	437	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	382	305	459	38.50	77.00	Enzymatic UV method
	mg/dl	4.32	3.45	5.19	0.44	0.87	
	µmol/l	383	307	459	38.00	76.00	Creatinine PAP method
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	µmol/l	378	302	454	38.00	76.00	Jaffe rate blanked
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	371	297	445	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.19	3.36	5.02	0.42	0.83	
	µmol/l	370	296	444	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.18	3.34	5.02	0.42	0.84	
	µmol/l	375	300	450	37.50	75.00	IDMS traceable
	mg/dl	4.24	3.39	5.09	0.43	0.85	
gamma-GT	U/l	175	149	201	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	176	149	203	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	

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SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.27	1.93	2.61	0.17	0.34	Direct HDL Immunoseparation
	mg/dl	87.6	74.5	101	6.55	13.10	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Direct Clearance Method
	mg/dl	88.0	74.9	101	6.55	13.10	
Iron	µmol/l	40.0	32.8	47.2	3.60	7.20	Colorimetric with ppt.
	µg/dl	224	183	265	20.50	41.00	
	µmol/l	40.4	33.1	47.7	3.65	7.30	Colorimetric without ppt.
	µg/dl	226	185	267	20.50	41.00	
Lactate	mmol/l	5.52	4.53	6.51	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.7	40.8	58.6	4.45	8.90	
LD (LDH)	U/l	365	310	420	27.50	55.00	L->P 37°C
	U/l	366	311	421	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	84	67	101	8.50	17.00	Other Colorimetric 37°C
Lithium	mmol/l	1.92	1.69	2.15	0.12	0.23	Spectrophotometric
	mg/dl	1.33	1.17	1.49	0.08	0.16	
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Xylidyl Blue
	mg/dl	4.01	3.52	4.50	0.25	0.49	
Phosphate Inorganic	mmol/l	2.22	1.88	2.56	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.88	5.83	7.93	0.53	1.05	
Potassium	mmol/l	6.33	5.82	6.84	0.26	0.51	ISE method - indirect
Protein Total	g/l	47.6	38.1	57.1	4.75	9.50	Biuret reaction end point
	g/dl	4.76	3.81	5.71	0.48	0.95	
	g/l	49.9	39.9	59.9	5.00	10.00	Biuret reaction kinetic
	g/dl	4.99	3.99	5.99	0.50	1.00	

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SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	46.1	36.4	55.8	4.85	9.70	Removal of excess free iron
	µg/dl	258	203	313	27.50	55.00	
	µmol/l	44.3	35.0	53.6	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	248	196	300	26.00	52.00	
	µmol/l	45.4	35.9	54.9	4.75	9.50	Direct Colorimetric
	µg/dl	254	201	307	26.50	53.00	
Triglycerides	mmol/l	2.84	2.39	3.29	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	251	212	290	19.50	39.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	255	214	296	20.50	41.00	
Urea	mmol/l	21.3	18.1	24.5	1.60	3.20	Urease end point
	mg/dl	128	109	147	9.50	19.00	
	mmol/l	21.5	18.3	24.7	1.60	3.20	Urease kinetic
	mg/dl	129	110	148	9.50	19.00	
	mmol/l	21.5	18.3	24.7	1.60	3.20	BUN
	mg/dl	60.3	51.3	69.3	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.48	8.23	10.7	0.63	1.25	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.39	8.16	10.6	0.62	1.23	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.48	8.25	10.7	0.62	1.23	

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RANDOX

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Purple
	g/dl	2.94	2.50	3.38	0.22	0.44	
Alkaline Phosphatase	U/l	279	237	321	21.00	42.00	Siemens Dimension AMP buffer 37°C
	U/l	280	238	322	21.00	42.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	161	129	193	16.00	32.00	Tris buffer with P5P 37°C
	U/l	162	130	194	16.00	32.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	330	280	380	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	188	150	226	19.00	38.00	Tris buffer with P5P 37°C
	U/l	187	149	225	19.00	38.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.866	1.31	0.11	0.22	
Bilirubin Total	µmol/l	85.1	67.3	103	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.98	3.94	6.02	0.52	1.04	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.66	5.80	7.52	0.43	0.86	Cholesterol Oxidase
	mg/dl	257	224	290	16.50	33.00	
	mmol/l	6.73	5.85	7.61	0.44	0.88	Dimension-Siemens reagents
	mg/dl	260	226	294	17.00	34.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholinesterase	U/l	9233	7386	11080	923.50	1847.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	464	381	547	41.50	83.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	386	309	463	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	388	310	466	39.00	78.00	Creatinine PAP method
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	383	307	459	38.00	76.00	Jaffe rate blanked
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	µmol/l	392	313	471	39.50	79.00	IDMS traceable
	mg/dl	4.43	3.54	5.32	0.45	0.89	
gamma-GT	U/l	182	154	210	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	208	177	239	15.50	31.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Oxygen electrode
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.78	2.36	3.20	0.21	0.42	Direct HDL PPD
	mg/dl	107	91.1	123	7.95	15.90	
	mmol/l	2.72	2.31	3.13	0.21	0.41	Direct HDL PEGME
	mg/dl	105	89.2	121	7.90	15.80	
	mmol/l	2.72	2.31	3.13	0.21	0.41	Direct Clearance Method
	mg/dl	105	89.2	121	7.90	15.80	
Iron	µmol/l	39.6	32.5	46.7	3.55	7.10	Colorimetric with ppt.
	µg/dl	221	182	260	19.50	39.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	39.6	32.5	46.7	3.55	7.10	Colorimetric without ppt.
	µg/dl	221	182	260	19.50	39.00	
Lactate	mmol/l	5.61	4.60	6.62	0.51	1.01	UV LDH
	mg/dl	50.5	41.4	59.6	4.55	9.10	
LD (LDH)	U/l	347	295	399	26.00	52.00	L->P 37°C
	U/l	354	301	407	26.50	53.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	353	300	406	26.50	53.00	L->P IFCC 37°C
Lipase	U/l	261	209	313	26.00	52.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
	mmol/l	1.64	1.44	1.84	0.10	0.20	Methylthymol blue
	mg/dl	3.99	3.50	4.48	0.25	0.49	
Osmolality	mOsm/kg	341	273	409	34.00	68.00	Calculated
Phosphate Inorganic	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.94	5.92	7.96	0.51	1.02	
	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	
Potassium	mmol/l	6.30	5.80	6.80	0.25	0.50	ISE method - indirect
Protein Total	g/l	50.0	40.0	60.0	5.00	10.00	Biuret reaction end point
	g/dl	5.00	4.00	6.00	0.50	1.00	
PSA Total	ng/ml =	29.3	21.9	36.7	3.70	7.40	Siemens Dimension
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.11	0.88	1.34	0.11	0.23	
TIBC	µmol/l	38.0	30.0	46.0	4.00	8.00	Removal of excess free iron
	µg/dl	212	168	256	22.00	44.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	37.9	29.9	45.9	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	212	167	257	22.50	45.00	
	µmol/l	37.2	29.4	45.0	3.90	7.80	Direct Colorimetric
	µg/dl	208	164	252	22.00	44.00	
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
	mmol/l	2.77	2.33	3.21	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.78	2.34	3.22	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	246	207	285	19.50	39.00	
Urea	mmol/l	21.5	18.3	24.7	1.60	3.20	Urease end point
	mg/dl	129	110	148	9.50	19.00	
	mmol/l	21.6	18.4	24.8	1.60	3.20	Urease kinetic
	mg/dl	130	111	149	9.50	19.00	
	mmol/l	21.6	18.4	24.8	1.60	3.20	BUN
	mg/dl	60.6	51.5	69.7	4.55	9.10	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.27	8.06	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.37	8.16	10.6	0.61	1.21	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Purple
	g/dl	2.94	2.50	3.38	0.22	0.44	
Alkaline Phosphatase	U/l	278	237	319	20.50	41.00	Siemens Dimension AMP buffer 37°C
	U/l	278	236	320	21.00	42.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	163	130	196	16.50	33.00	Tris buffer with P5P 37°C
	U/l	162	130	194	16.00	32.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	252	214	290	19.00	38.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	331	281	381	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	191	153	229	19.00	38.00	Tris buffer with P5P 37°C
	U/l	187	150	224	18.50	37.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	18.9	14.9	22.9	2.00	4.00	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.11	0.872	1.35	0.12	0.24	
Bilirubin Total	µmol/l	85.6	67.6	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.01	3.95	6.07	0.53	1.06	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	2.99	2.69	3.29	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.75	5.87	7.63	0.44	0.88	Cholesterol Oxidase
	mg/dl	261	227	295	17.00	34.00	
	mmol/l	6.73	5.86	7.60	0.44	0.87	Dimension-Siemens reagents
	mg/dl	260	226	294	17.00	34.00	
Cholinesterase	U/l	9350	7480	11220	935.00	1870.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	465	381	549	42.00	84.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	388	310	466	39.00	78.00	Alkaline picrate with deproteinization
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	386	309	463	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	385	308	462	38.50	77.00	Creatinine PAP method
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	386	309	463	38.50	77.00	Jaffe rate blanked
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	393	315	471	39.00	78.00	IDMS traceable
	mg/dl	4.44	3.56	5.32	0.44	0.88	
gamma-GT	U/l	184	157	211	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	206	175	237	15.50	31.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Glucose dehydrogenase
	mg/dl	272	231	313	20.50	41.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.80	2.38	3.22	0.21	0.42	Direct HDL PPD
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	2.67	2.27	3.07	0.20	0.40	Direct HDL Immunoseparation
	mg/dl	103	87.6	118	7.70	15.40	
	mmol/l	2.73	2.32	3.14	0.21	0.41	Direct HDL PEGME
	mg/dl	105	89.6	120	7.70	15.40	
Iron	µmol/l	39.6	32.4	46.8	3.60	7.20	Colorimetric with ppt.
	µg/dl	221	181	261	20.00	40.00	
	µmol/l	39.6	32.5	46.7	3.55	7.10	Colorimetric without ppt.
	µg/dl	221	182	260	19.50	39.00	
Lactate	mmol/l	5.63	4.61	6.65	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	50.7	41.5	59.9	4.60	9.20	
	mmol/l	5.47	4.49	6.45	0.49	0.98	UV LDH
	mg/dl	49.3	40.5	58.1	4.40	8.80	
LD (LDH)	U/l	348	296	400	26.00	52.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	351	298	404	26.50	53.00	L->P IFCC 37°C
Lipase	U/l	262	210	314	26.00	52.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	2.22	1.96	2.48	0.13	0.26	Spectrophotometric
	mg/dl	1.54	1.36	1.72	0.09	0.18	
Magnesium	mmol/l	1.66	1.46	1.86	0.10	0.20	Methylthymol blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.88	5.86	7.90	0.51	1.02	
	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.22	5.72	6.72	0.25	0.50	ISE method - indirect
Protein Total	g/l	49.8	39.9	59.7	4.95	9.90	Biuret reaction end point
	g/dl	4.98	3.99	5.97	0.50	0.99	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	37.4	29.6	45.2	3.90	7.80	Removal of excess free iron
	µg/dl	209	165	253	22.00	44.00	
	µmol/l	37.5	29.6	45.4	3.95	7.90	FE+UIBC(saturation with iron)
	µg/dl	210	165	255	22.50	45.00	
	µmol/l	37.5	29.6	45.4	3.95	7.90	Direct Colorimetric
	µg/dl	210	165	255	22.50	45.00	
Triglycerides	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.76	2.32	3.20	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	244	205	283	19.50	39.00	
	mmol/l	2.72	2.29	3.15	0.22	0.43	Lipase/Glycerol Dehydrogenase
	mg/dl	241	203	279	19.00	38.00	
Urea	mmol/l	20.9	17.7	24.1	1.60	3.20	Urease end point
	mg/dl	126	106	146	10.00	20.00	
	mmol/l	21.4	18.2	24.6	1.60	3.20	Urease kinetic
	mg/dl	129	109	149	10.00	20.00	
	mmol/l	21.4	18.2	24.6	1.60	3.20	BUN
	mg/dl	60.1	51.1	69.1	4.50	9.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	

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Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.21	8.00	10.4	0.61	1.21	

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RANDOX

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1090UE Cat. No. HE1532 / HS2611

Size 20 x 5 ml / 5 x 5 ml Expiry 2023-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Purple
	g/dl	3.03	2.58	3.48	0.23	0.45	
Alkaline Phosphatase	U/l	291	247	335	22.00	44.00	Siemens Dimension AMP buffer 37°C
	U/l	285	242	328	21.50	43.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	158	126	190	16.00	32.00	Tris buffer with P5P 37°C
Amylase Total	U/l	325	276	374	24.50	49.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	190	152	228	19.00	38.00	Tris buffer with P5P 37°C
	U/l	196	157	235	19.50	39.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Enzymatic
Bilirubin Total	µmol/l	85.8	67.8	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.02	3.97	6.07	0.53	1.05	
Calcium	mmol/l	3.07	2.76	3.38	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	124	114	134	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.82	5.93	7.71	0.45	0.89	Cholesterol Oxidase
	mg/dl	263	229	297	17.00	34.00	
	mmol/l	6.80	5.92	7.68	0.44	0.88	Dimension-Siemens reagents
	mg/dl	262	229	295	16.50	33.00	
CK Total	U/l	467	383	551	42.00	84.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	398	318	478	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.50	3.59	5.41	0.46	0.91	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	205	174	236	15.50	31.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.82	2.39	3.25	0.22	0.43	Direct HDL PPD
	mg/dl	109	92.3	126	8.35	16.70	
	mmol/l	2.70	2.30	3.10	0.20	0.40	Direct HDL PEGME
	mg/dl	104	88.8	119	7.60	15.20	
Iron	µmol/l	40.4	33.1	47.7	3.65	7.30	Colorimetric without ppt.
	µg/dl	226	185	267	20.50	41.00	
LD (LDH)	U/l	357	303	411	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	327	262	392	32.50	65.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Methylthymol blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	
Potassium	mmol/l	6.21	5.71	6.71	0.25	0.50	ISE method - indirect
Protein Total	g/l	50.6	40.5	60.7	5.05	10.10	Biuret reaction end point
	g/dl	5.06	4.05	6.07	0.51	1.01	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
Urea	mmol/l	22.1	18.8	25.4	1.65	3.30	Urease kinetic
	mg/dl	133	113	153	10.00	20.00	
	mmol/l	22.1	18.8	25.4	1.65	3.30	BUN
	mg/dl	62.0	52.7	71.3	4.65	9.30	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.22	8.03	10.4	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	8.10	10.5	0.60	1.19	

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