RANDOX 0086 CE

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. 1038UE **EXPIRY:** 2021-07-28

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.

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

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

With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean ±2S.D. This results in an assayed serum with extremely accurate values, which may be confidently used by laboratories to ensure the accuracy of their methods.

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

NOTES

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

25 Oct '18 ne

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RANDOX

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.6	24.3	32.9	2.15	4.30	Bromocresol Green
	g/dl	2.86	2.43	3.29	0.22	0.43	
	g/l	27.1	23.0	31.2	2.05	4.10	Bromocresol Purple
	g/dl	2.71	2.30	3.12	0.21	0.41	
Alkaline Phosphatase	U/l	304	258	350	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	301	255	347	23.00	46.00	AMP non-optimised 37°C
ALT (GPT)	U/l	124	99	149	12.50	25.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	219	186	252	16.50	33.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	281	238	324	21.50	43.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	312	265	359	23.50	47.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Enzymatic
Bile Acids	µmol/l	43.4	34.7	52.1	4.35	8.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Bilirubin Total	µmol/l	82.9	65.5	100	8.70	17.40	Diazo with Dichloroaniline (DCA)
	mg/dl	4.85	3.83	5.87	0.51	1.02	
	µmol/l	82.0	64.7	99.3	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.80	3.78	5.82	0.51	1.02	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	79.4	62.7	96.1	8.35	16.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.64	3.67	5.61	0.49	0.97	
	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	3.23	2.90	3.56	0.17	0.33	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
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	6041	4833	7249	604.00	1208.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	558	457	659	50.50	101.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	21.0	16.8	25.2	2.10	4.20	Colorimetric
	µg/dl	134	107	161	13.50	27.00	
Creatinine	µmol/l	393	314	472	39.50	79.00	Alkaline picrate no deproteinization
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	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	392	314	470	39.00	78.00	Jaffe rate blanked
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	392	314	470	39.00	78.00	IDMS traceable
	mg/dl	4.43	3.55	5.31	0.44	0.88	
gamma-GT	U/l	152	129	175	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.25	1.91	2.59	0.17	0.34	Direct HDL PPD
	mg/dl	86.9	73.7	100	6.60	13.20	
	mmol/l	2.24	1.91	2.57	0.17	0.33	Direct Clearance Method
	mg/dl	86.5	73.7	99.3	6.40	12.80	
	mmol/l	2.20	1.87	2.53	0.17	0.33	HDL - Ultra
	mg/dl	84.9	72.2	97.6	6.35	12.70	
Iron	µmol/l	36.8	30.2	43.4	3.30	6.60	Colorimetric with ppt.
	µg/dl	206	169	243	18.50	37.00	
	µmol/l	36.3	29.8	42.8	3.25	6.50	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
Lactate	mmol/l	5.48	4.49	6.47	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.4	40.5	58.3	4.45	8.90	
LD (LDH)	U/l	354	301	407	26.50	53.00	L->P 37°C
	U/l	354	301	407	26.50	53.00	L->P IFCC 37°C
Lipase	U/l	111	89	133	11.00	22.00	Other Colorimetric 37°C
Lithium	mmol/l	2.06	1.82	2.30	0.12	0.24	Spectrophotometric
	mg/dl	1.43	1.26	1.60	0.09	0.17	
Magnesium	mmol/l	1.74	1.54	1.94	0.10	0.20	Arsenazo III
	mg/dl	4.23	3.74	4.72	0.25	0.49	
	mmol/l	1.77	1.55	1.99	0.11	0.22	Enzymatic
	mg/dl	4.30	3.77	4.83	0.27	0.53	

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Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	345	276	414	34.50	69.00	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	2.19	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	5.90	5.43	6.37	0.24	0.47	ISE method - indirect
Protein Total	g/l	46.6	37.3	55.9	4.65	9.30	Biuret reaction end point
	g/dl	4.66	3.73	5.59	0.47	0.93	
	g/l	47.0	37.6	56.4	4.70	9.40	Biuret reaction kinetic
	g/dl	4.70	3.76	5.64	0.47	0.94	
Sodium	mmol/l	158	151	165	3.50	7.00	ISE method - indirect
TIBC	µmol/l	54.4	43.0	65.8	5.70	11.40	FE+UIBC(saturation with iron)
	µg/dl	304	240	368	32.00	64.00	
Triglycerides	mmol/l	2.85	2.40	3.30	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.84	2.39	3.29	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	251	212	290	19.50	39.00	
	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	253	212	294	20.50	41.00	
UIBC	µmol/l	16.2	13.3	19.1	1.45	2.90	Direct Colorimetric
	µg/dl	90.6	74.3	107	8.15	16.30	
Urea	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease end point
	mg/dl	114	97.4	131	8.30	16.60	

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.0	16.1	21.9	1.45	2.90	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	19.0	16.2	21.8	1.40	2.80	BUN
	mg/dl	53.3	45.3	61.3	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.90	8.62	11.2	0.64	1.28	
	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.91	8.62	11.2	0.65	1.29	
	mmol/l	0.59	0.52	0.67	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.96	8.67	11.3	0.65	1.29	

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ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.9	24.5	33.3	2.20	4.40	Bromocresol Green
	g/dl	2.89	2.45	3.33	0.22	0.44	
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	143	114	172	14.50	29.00	Agappee - IFCC 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	142	114	170	14.00	28.00	Agappee - IFCC 37°C
Bilirubin Direct	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Bilirubin Total	µmol/l	89.2	70.4	108	9.40	18.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.22	4.12	6.32	0.55	1.10	
Calcium	mmol/l	3.33	3.00	3.66	0.17	0.33	Arsenazo III
	mg/dl	13.3	12.0	14.6	0.65	1.30	
Cholesterol	mmol/l	7.37	6.42	8.32	0.48	0.95	Cholesterol Oxidase
	mg/dl	284	248	320	18.00	36.00	
Creatinine	µmol/l	377	301	453	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.26	3.40	5.12	0.43	0.86	
gamma-GT	U/l	155	132	178	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.1	12.9	17.3	1.10	2.20	Glucose oxidase
	mg/dl	272	232	312	20.00	40.00	
HDL - Cholesterol	mmol/l	2.33	1.98	2.68	0.18	0.35	Direct HDL PPD
	mg/dl	89.9	76.4	103	6.75	13.50	

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Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	34.6	28.4	40.8	3.10	6.20	Colorimetric without ppt.
	µg/dl	193	159	227	17.00	34.00	
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	2.42	2.06	2.78	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.50	6.39	8.61	0.56	1.11	
Potassium	mmol/l	5.78	5.32	6.24	0.23	0.46	ISE method - direct
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	
	g/l	49.6	39.7	59.5	4.95	9.90	Agappe - Biuret
	g/dl	4.96	3.97	5.95	0.50	0.99	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	216	300	21.00	42.00	
Urea	mmol/l	17.7	15.1	20.3	1.30	2.60	Urease end point
	mg/dl	106	90.8	121	7.60	15.20	
	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease kinetic
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.0	15.3	20.7	1.35	2.70	BUN
	mg/dl	50.5	42.9	58.1	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.84	8.57	11.1	0.64	1.27	
	mmol/l	0.59	0.52	0.67	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.96	8.67	11.3	0.65	1.29	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	398	314	482	42.00	84.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	27.6	23.5	31.7	2.05	4.10	Bromocresol Green
	g/dl	2.76	2.35	3.17	0.21	0.41	
	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Purple
	g/dl	3.01	2.56	3.46	0.23	0.45	
Alkaline Phosphatase	U/l	471	400	542	35.50	71.00	Diethanolamine buffer DEA 37°C
	U/l	372	317	427	27.50	55.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
	U/l	115	92	138	11.50	23.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	241	205	277	18.00	36.00	pNP Maltotrioside substrates 37°C
	U/l	248	211	285	18.50	37.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	231	197	265	17.00	34.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	121	97	145	12.00	24.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	23.0	18.2	27.8	2.40	4.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.35	1.06	1.64	0.15	0.29	
Bilirubin Total	µmol/l	84.9	67.0	103	8.95	17.90	Diazo with Dichloroaniline (DCA)
	mg/dl	4.97	3.92	6.02	0.53	1.05	
	µmol/l	85.7	67.7	104	9.00	18.00	DPD (Beckman AU)
	mg/dl	5.01	3.96	6.06	0.53	1.05	

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RANDOX

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.21	2.89	3.53	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.9	11.6	14.2	0.65	1.30	
	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Chloride	mmol/l	114	105	123	4.50	9.00	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	
Cholinesterase	U/l	4924	3939	5909	492.50	985.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	592	485	699	53.50	107.00	CK-NAC substrate start (DGKC) 37°C
	U/l	569	467	671	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	515	422	608	46.50	93.00	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	25.5	20.4	30.6	2.55	5.10	Colorimetric
	µg/dl	162	130	194	16.00	32.00	
Creatinine	µmol/l	368	295	441	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.16	3.33	4.99	0.42	0.83	
	µmol/l	382	306	458	38.00	76.00	Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	393	315	471	39.00	78.00	Creatinine PAP method
	mg/dl	4.44	3.56	5.32	0.44	0.88	
	µmol/l	363	290	436	36.50	73.00	Jaffe rate blanked
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	368	294	442	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	µmol/l	378	302	454	38.00	76.00	IDMS traceable
	mg/dl	4.27	3.41	5.13	0.43	0.86	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
D-3-Hydroxybutyrate	mmol/l	1.12	0.95	1.29	0.08	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	159	135	183	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	131	111	151	10.00	20.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	156	133	179	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	28	22	34	3.00	6.00	Triethanolamine buffer 50 mmol 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	
	mmol/l	16.1	13.7	18.5	1.20	2.40	Glucose oxidase
	mg/dl	290	247	333	21.50	43.00	
HDL - Cholesterol	mmol/l	2.37	2.01	2.73	0.18	0.36	Direct HDL Immunoseparation
	mg/dl	91.5	77.6	105	6.95	13.90	
	mmol/l	2.34	1.99	2.69	0.18	0.35	Direct Clearance Method
	mg/dl	90.3	76.8	104	6.75	13.50	
	mmol/l	2.29	1.95	2.63	0.17	0.34	HDL - Ultra
	mg/dl	88.4	75.3	102	6.55	13.10	
Iron	µmol/l	37.0	30.4	43.6	3.30	6.60	Colorimetric with ppt.
	µg/dl	207	170	244	18.50	37.00	
	µmol/l	36.6	30.0	43.2	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
Lactate	mmol/l	5.25	4.31	6.19	0.47	0.94	Colorimetric Lactate Oxidase
	mg/dl	47.3	38.8	55.8	4.25	8.50	
LD (LDH)	U/l	353	300	406	26.50	53.00	L->P 37°C
	U/l	795	675	915	60.00	120.00	P->L Scandinavian & Dutch 37°C
	U/l	356	303	409	26.50	53.00	L->P IFCC 37°C
	U/l	299	254	344	22.50	45.00	L to P Beckman (Extinction Coeff) 37°C

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	119	95	143	12.00	24.00	Other Colorimetric 37°C
	U/l	81	65	97	8.00	16.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.10	1.85	2.35	0.13	0.25	Spectrophotometric
	mg/dl	1.46	1.28	1.64	0.09	0.18	
Magnesium	mmol/l	1.80	1.59	2.01	0.11	0.21	Xylidyl Blue
	mg/dl	4.37	3.86	4.88	0.26	0.51	
Osmolality	mOsm/kg	341	272	410	34.50	69.00	Calculated
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	5.88	5.41	6.35	0.24	0.47	ISE method - indirect
Protein Total	g/l	45.7	36.5	54.9	4.60	9.20	Biuret reaction end point
	g/dl	4.57	3.65	5.49	0.46	0.92	
	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction kinetic
	g/dl	4.56	3.65	5.47	0.46	0.91	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	54.5	43.1	65.9	5.70	11.40	FE+UIBC(saturation with iron)
	µg/dl	305	241	369	32.00	64.00	
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	2.91	2.44	3.38	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	258	216	300	21.00	42.00	
UIBC	µmol/l	18.1	14.8	21.4	1.65	3.30	Direct Colorimetric
	µg/dl	101	82.7	119	9.15	18.30	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease end point
	mg/dl	112	95.0	129	8.50	17.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.62	0.54	0.70	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.4	9.07	11.7	0.67	1.33	
	mmol/l	0.61	0.53	0.69	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.3	8.97	11.6	0.67	1.33	
	mmol/l	0.60	0.52	0.68	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	10.0	8.74	11.3	0.63	1.26	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Purple
	g/dl	2.92	2.48	3.36	0.22	0.44	
Alkaline Phosphatase	U/l	325	277	373	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	328	279	377	24.50	49.00	AMP non-optimised 37°C
ALT (GPT)	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
	U/l	119	95	143	12.00	24.00	Tris buffer SCE 37°C
Amylase Total	U/l	245	208	282	18.50	37.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	255	217	293	19.00	38.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
	U/l	128	102	154	13.00	26.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Differential rate pH change
	mmol/l	16.2	12.8	19.6	1.70	3.40	Ion selective electrode
Bilirubin Direct	µmol/l	15.4	12.2	18.6	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.901	0.714	1.09	0.09	0.19	
Bilirubin Total	µmol/l	81.7	64.5	98.9	8.60	17.20	Diazo with Sulphanilic Acid
	mg/dl	4.78	3.77	5.79	0.51	1.01	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Ion selective electrode
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.20	2.88	3.52	0.16	0.32	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.06	6.14	7.98	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	237	309	18.00	36.00	
CK Total	U/l	553	453	653	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	566	464	668	51.00	102.00	Monothioglycerol 37°C
Creatinine	µmol/l	378	302	454	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	379	303	455	38.00	76.00	IDMS traceable
	mg/dl	4.28	3.42	5.14	0.43	0.86	
Free T4	pmol/l	61.2	45.9	76.5	7.65	15.30	Beckman DxI800
	ng/dl	4.77	3.58	5.96	0.60	1.19	
	pg/ml	47.7	35.8	59.6	5.95	11.90	Beckman DxI800
gamma-GT	U/l	129	109	149	10.00	20.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	14.7	12.5	16.9	1.10	2.20	Hexokinase
	mg/dl	265	225	305	20.00	40.00	
	mmol/l	15.0	12.7	17.3	1.15	2.30	Oxygen electrode
	mg/dl	270	229	311	20.50	41.00	
	mmol/l	14.7	12.5	16.9	1.10	2.20	Glucose oxidase
	mg/dl	265	225	305	20.00	40.00	
HDL - Cholesterol	mmol/l	2.26	1.92	2.60	0.17	0.34	Direct HDL PPD
	mg/dl	87.2	74.1	100	6.55	13.10	
	mmol/l	2.34	1.99	2.69	0.18	0.35	HDL - Ultra
	mg/dl	90.3	76.8	104	6.75	13.50	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	36.2	29.7	42.7	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	166	238	18.00	36.00	
Lactate	mmol/l	4.96	4.07	5.85	0.45	0.89	Colorimetric Lactate Oxidase
	mg/dl	44.7	36.7	52.7	4.00	8.00	
LD (LDH)	U/l	296	251	341	22.50	45.00	L->P 37°C
Lipase	U/l	65	52	78	6.50	13.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.72	1.52	1.92	0.10	0.20	Calmagite
	mg/dl	4.18	3.69	4.67	0.25	0.49	
Osmolality	mOsm/kg	337	269	405	34.00	68.00	Calculated
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.07	6.01	8.13	0.53	1.06	
	mmol/l	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Potassium	mmol/l	5.86	5.39	6.33	0.24	0.47	ISE method - indirect
Protein Total	g/l	44.4	35.5	53.3	4.45	8.90	Biuret reaction CX4/5/7
	g/dl	4.44	3.55	5.33	0.45	0.89	
	g/l	45.1	36.1	54.1	4.50	9.00	Biuret reaction end point
	g/dl	4.51	3.61	5.41	0.45	0.90	
	g/l	43.7	35.0	52.4	4.35	8.70	Biuret reaction kinetic
	g/dl	4.37	3.50	5.24	0.44	0.87	
Sodium	mmol/l	156	149	163	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.13	0.90	1.36	0.11	0.23	Beckman DxI800 Hyper TSH
Triglycerides	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.99	2.51	3.47	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	265	222	308	21.50	43.00	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease end point
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease kinetic
	mg/dl	115	97.4	133	8.80	17.60	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	
Uric Acid (Urate)	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	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.2	24.9	33.5	2.15	4.30	Bromocresol Green
	g/dl	2.92	2.49	3.35	0.22	0.43	
Alkaline Phosphatase	U/l	309	263	355	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	241	205	277	18.00	36.00	AMP optimised to IFCC 30°C
	U/l	197	168	226	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
	U/l	104	84	124	10.00	20.00	Tris buffer without P5P 30°C
	U/l	79	64	94	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	77	117	10.00	20.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	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	
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	
Cholesterol	mmol/l	7.12	6.20	8.04	0.46	0.92	Cholesterol Oxidase
	mg/dl	275	239	311	18.00	36.00	
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Glucose oxidase
	mg/dl	283	241	325	21.00	42.00	
Protein Total	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction end point
	g/dl	4.53	3.62	5.44	0.46	0.91	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.73	2.29	3.17	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	242	203	281	19.50	39.00	
Urea	mmol/l	17.9	15.2	20.6	1.35	2.70	Urease kinetic
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	17.9	15.2	20.6	1.35	2.70	BUN
	mg/dl	50.2	42.7	57.7	3.75	7.50	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.3	24.0	32.6	2.15	4.30	Bromocresol Green
	g/dl	2.83	2.40	3.26	0.22	0.43	
Alkaline Phosphatase	U/l	296	252	340	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	231	196	266	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	189	161	217	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	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 Total	µmol/l	85.9	67.9	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.03	3.97	6.09	0.53	1.06	
Cholesterol	mmol/l	7.44	6.47	8.41	0.49	0.97	Cholesterol Oxidase
	mg/dl	287	250	324	18.50	37.00	
CK Total	U/l	535	439	631	48.00	96.00	CK-NAC (IFCC) 37°C
	U/l	335	275	395	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	227	187	267	20.00	40.00	CK-NAC (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	
Phosphate Inorganic	mmol/l	2.36	2.01	2.71	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.32	6.23	8.41	0.55	1.09	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	257	216	298	20.50	41.00	
Urea	mmol/l	17.4	14.8	20.0	1.30	2.60	Urease kinetic
	mg/dl	105	88.9	121	8.05	16.10	
	mmol/l	17.4	14.8	20.0	1.30	2.60	BUN
	mg/dl	48.8	41.5	56.1	3.65	7.30	
Uric Acid (Urate)	mmol/l	0.61	0.53	0.69	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.2	8.87	11.5	0.67	1.33	
	mmol/l	0.61	0.53	0.69	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.3	8.97	11.6	0.67	1.33	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Green
	g/dl	2.98	2.53	3.43	0.23	0.45	
ALT (GPT)	U/l	137	109	165	14.00	28.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	136	108	164	14.00	28.00	Tris buffer without P5P 37°C
	U/l	92	73	111	9.50	19.00	Tris buffer without P5P 30°C
	U/l	65	51	79	7.00	14.00	Tris buffer without P5P 25°C
Calcium	mmol/l	3.16	2.84	3.48	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.4	14.0	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	
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	386	309	463	38.50	77.00	Creatinine PAP method
	mg/dl	4.36	3.49	5.23	0.44	0.87	
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.43	2.07	2.79	0.18	0.36	Direct HDL Immunoseparation
	mg/dl	93.8	79.9	108	6.95	13.90	
Iron	µmol/l	33.2	27.2	39.2	3.00	6.00	Colorimetric without ppt.
	µg/dl	186	152	220	17.00	34.00	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	49.2	39.4	59.0	4.90	9.80	Biuret reaction end point
	g/dl	4.92	3.94	5.90	0.49	0.98	
Triglycerides	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
Urea	mmol/l	18.4	15.7	21.1	1.35	2.70	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.4	15.6	21.2	1.40	2.80	BUN
	mg/dl	51.6	43.9	59.3	3.85	7.70	
Uric Acid (Urate)	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	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	27.0	22.9	31.1	2.05	4.10	Turbidimetric Assays
	g/dl	2.70	2.29	3.11	0.21	0.41	
Alkaline Phosphatase	U/l	266	227	305	19.50	39.00	Roche Integra AMP buffer 37°C
	U/l	207	177	237	15.00	30.00	Roche Integra AMP buffer 30°C
	U/l	170	145	195	12.50	25.00	Roche Integra AMP buffer 25°C
	U/l	261	221	301	20.00	40.00	AMP optimised to IFCC 37°C
	U/l	203	172	234	15.50	31.00	AMP optimised to IFCC 30°C
	U/l	167	141	193	13.00	26.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	119	95	143	12.00	24.00	Tris buffer without P5P 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	220	187	253	16.50	33.00	Roche EPS Liquid 37°C
Amylase Total	U/l	244	207	281	18.50	37.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	242	205	279	18.50	37.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	241	205	277	18.00	36.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 30°C
	U/l	62	50	74	6.00	12.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.2	12.9	19.5	1.65	3.30	Enzymatic

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	28.8	22.7	34.9	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.7	22.6	34.8	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.32	2.04	0.18	0.36	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Roche JG factored
	mg/dl	1.66	1.31	2.01	0.18	0.35	
Bilirubin Total	µmol/l	75.7	59.8	91.6	7.95	15.90	Diazo with Dichloroaniline (DCA)
	mg/dl	4.43	3.50	5.36	0.47	0.93	
	µmol/l	76.0	60.0	92.0	8.00	16.00	Diazo with Sulphanilic Acid
	mg/dl	4.45	3.51	5.39	0.47	0.94	
	µmol/l	76.1	60.1	92.1	8.00	16.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.45	3.52	5.38	0.47	0.93	
	µmol/l	76.4	60.4	92.4	8.00	16.00	Diazonium ion
	mg/dl	4.47	3.53	5.41	0.47	0.94	
Calcium	mmol/l	3.27	2.94	3.60	0.17	0.33	Cresolphthalein complexone
	mg/dl	13.1	11.8	14.4	0.65	1.30	
	mmol/l	3.25	2.92	3.58	0.17	0.33	NM-BAPTA
	mg/dl	13.0	11.7	14.3	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.15	6.22	8.08	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
	mmol/l	6.97	6.07	7.87	0.45	0.90	Agappe - CHOD-PAP
	mg/dl	269	234	304	17.50	35.00	
CK Total	U/l	533	437	629	48.00	96.00	CK-NAC (IFCC) 37°C
	U/l	334	274	394	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	227	186	268	20.50	41.00	CK-NAC (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	518	425	611	46.50	93.00	Creatinine phosphate substrate Start 37°C
	U/l	324	266	382	29.00	58.00	Creatinine phosphate substrate Start 30°C
	U/l	220	181	259	19.50	39.00	Creatinine phosphate substrate Start 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	382	305	459	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.32	3.45	5.19	0.44	0.87	
	µmol/l	362	290	434	36.00	72.00	Jaffe rate blanked
	mg/dl	4.09	3.28	4.90	0.41	0.81	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.12	3.30	4.94	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	
gamma-GT	U/l	144	123	165	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	113	97	129	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	89	76	102	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	158	135	181	11.50	23.00	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	97	83	111	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.42	2.05	2.79	0.19	0.37	Direct HDL Roche 3rd generation
	mg/dl	93.4	79.1	108	7.15	14.30	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	35.4	29.0	41.8	3.20	6.40	Colorimetric with ppt.
	µg/dl	198	162	234	18.00	36.00	
	µmol/l	36.0	29.5	42.5	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	165	237	18.00	36.00	
Lactate	mmol/l	5.45	4.47	6.43	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.1	40.3	57.9	4.40	8.80	
LD (LDH)	U/l	684	582	786	51.00	102.00	P->L German methods 37°C
	U/l	494	420	568	37.00	74.00	P->L German methods 30°C
	U/l	347	295	399	26.00	52.00	P->L German methods 25°C
	U/l	367	312	422	27.50	55.00	L->P IFCC 37°C
	U/l	265	225	305	20.00	40.00	L->P IFCC 30°C
	U/l	186	158	214	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	78	63	93	7.50	15.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.14	1.88	2.40	0.13	0.26	Ion selective electrode
	mg/dl	1.49	1.31	1.67	0.09	0.18	
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	
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	2.31	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	5.88	5.41	6.35	0.24	0.47	ISE method - indirect
Protein Total	g/l	43.7	34.9	52.5	4.40	8.80	Biuret reaction end point
	g/dl	4.37	3.49	5.25	0.44	0.88	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	43.5	34.8	52.2	4.35	8.70	Biuret reaction kinetic
	g/dl	4.35	3.48	5.22	0.44	0.87	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.4	41.4	63.4	5.50	11.00	FE+UIBC(saturation with iron)
	µg/dl	293	231	355	31.00	62.00	
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	246	206	286	20.00	40.00	
Urea	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease kinetic
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.0	15.3	20.7	1.35	2.70	BUN
	mg/dl	50.5	42.9	58.1	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.60	0.52	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.0	8.70	11.3	0.65	1.30	
	mmol/l	0.60	0.52	0.68	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.1	8.75	11.5	0.68	1.35	
	mmol/l	0.60	0.52	0.67	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	10.0	8.72	11.3	0.64	1.28	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.4	25.8	35.0	2.30	4.60	Bromocresol Green
	g/dl	3.04	2.58	3.50	0.23	0.46	
Alkaline Phosphatase	U/l	423	360	486	31.50	63.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	89.3	70.6	108	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.22	4.13	6.31	0.55	1.09	
Calcium	mmol/l	3.23	2.91	3.55	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.7	14.1	0.60	1.20	
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	562	461	663	50.50	101.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	353	282	424	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	3.99	3.19	4.79	0.40	0.80	
gamma-GT	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
Iron	µmol/l	36.0	29.5	42.5	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	165	237	18.00	36.00	
LD (LDH)	U/l	354	301	407	26.50	53.00	L->P IFCC 37°C
Phosphate Inorganic	mmol/l	2.37	2.01	2.73	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.35	6.23	8.47	0.56	1.12	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	49.9	39.9	59.9	5.00	10.00	Biuret reaction end point
	g/dl	4.99	3.99	5.99	0.50	1.00	
Triglycerides	mmol/l	2.76	2.31	3.21	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	244	204	284	20.00	40.00	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease kinetic
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	18.8	16.0	21.6	1.40	2.80	BUN
	mg/dl	52.8	44.9	60.7	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.64	0.56	0.73	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.8	9.39	12.2	0.71	1.41	

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HITACHI SERIES®

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (non-prostatic)	U/l	13.5	9.05	18.0	2.23	4.45	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	28.6	19.2	38.0	4.70	9.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	42.1	28.2	56.0	6.95	13.90	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	29.7	25.2	34.2	2.25	4.50	Bromocresol Green
	g/dl	2.97	2.52	3.42	0.23	0.45	
Alkaline Phosphatase	U/l	242	205	279	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	189	160	218	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	155	131	179	12.00	24.00	Roche Integra AMP buffer 25°C
	U/l	324	275	373	24.50	49.00	Randox AMP 37°C
	U/l	252	214	290	19.00	38.00	Randox AMP 30°C
	U/l	207	176	238	15.50	31.00	Randox AMP 25°C
ALT (GPT)	U/l	123	98	148	12.50	25.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	252	214	290	19.00	38.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	231	197	265	17.00	34.00	Roche liquid stable pNPG7 37°C
	U/l	277	235	319	21.00	42.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	132	105	159	13.50	27.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	63	50	76	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.0	13.5	20.5	1.75	3.50	Enzymatic

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	43.6	34.9	52.3	4.35	8.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	25.6	20.2	31.0	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Bilirubin Total	µmol/l	76.3	60.3	92.3	8.00	16.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.46	3.53	5.39	0.47	0.93	
	µmol/l	74.9	59.2	90.6	7.85	15.70	Diazonium ion
	mg/dl	4.38	3.46	5.30	0.46	0.92	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.9	11.6	14.2	0.65	1.30	
	mmol/l	3.23	2.91	3.55	0.16	0.32	NM-BAPTA
	mg/dl	12.9	11.7	14.1	0.60	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
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	534	438	630	48.00	96.00	CK-NAC (IFCC) 37°C
	U/l	334	274	394	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	227	186	268	20.50	41.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	377	301	453	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.26	3.40	5.12	0.43	0.86	
	µmol/l	377	301	453	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.26	3.40	5.12	0.43	0.86	
gamma-GT	U/l	136	116	156	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	107	91	123	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	84	72	96	6.00	12.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	162	137	187	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	128	108	148	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	100	85	115	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	166	141	191	12.50	25.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	131	111	151	10.00	20.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	87	117	7.50	15.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	27	21	33	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	21	16	26	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	15.1	12.9	17.3	1.10	2.20	Hexokinase
	mg/dl	272	232	312	20.00	40.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.52	2.15	2.89	0.19	0.37	Direct HDL Roche 3rd generation
	mg/dl	97.3	83.0	112	7.15	14.30	
Iron	µmol/l	35.6	29.2	42.0	3.20	6.40	Colorimetric without ppt.
	µg/dl	199	163	235	18.00	36.00	
Lactate	mmol/l	5.38	4.41	6.35	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.5	39.7	57.3	4.40	8.80	
LD (LDH)	U/l	358	304	412	27.00	54.00	L->P IFCC 37°C
	U/l	258	219	297	19.50	39.00	L->P IFCC 30°C
	U/l	182	154	210	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	76	61	91	7.50	15.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	

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HITACHI SERIES®

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.91	5.86	7.96	0.53	1.05	
Potassium	mmol/l	5.94	5.47	6.41	0.24	0.47	ISE method - indirect
Protein Total	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction end point
	g/dl	4.59	3.67	5.51	0.46	0.92	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease kinetic
	mg/dl	115	97.4	133	8.80	17.60	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.83	8.55	11.1	0.64	1.28	
	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.93	8.64	11.2	0.65	1.29	

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RANDOX

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Green
	g/dl	2.93	2.49	3.37	0.22	0.44	
Alkaline Phosphatase	U/l	330	281	379	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	257	219	295	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	211	180	242	15.50	31.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	112	90	134	11.00	22.00	Tris buffer without P5P 37°C
	U/l	83	67	99	8.00	16.00	Tris buffer without P5P 30°C
	U/l	63	51	75	6.00	12.00	Tris buffer without P5P 25°C
Amylase Total	U/l	254	215	293	19.50	39.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 30°C
	U/l	60	48	72	6.00	12.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	84.7	66.9	103	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.95	3.91	5.99	0.52	1.04	
Calcium	mmol/l	3.34	3.00	3.68	0.17	0.34	Cresolphthalein complexone
	mg/dl	13.4	12.0	14.8	0.70	1.40	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.04	6.13	7.95	0.46	0.91	Cholesterol Oxidase
	mg/dl	272	237	307	17.50	35.00	
CK Total	U/l	499	409	589	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	312	256	368	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	212	174	250	19.00	38.00	CK-NAC (IFCC) 25°C

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	341	272	410	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.85	3.07	4.63	0.39	0.78	
D-3-Hydroxybutyrate	mmol/l	1.13	0.96	1.30	0.09	0.17	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	141	120	162	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	111	95	127	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	87	74	100	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	142	121	163	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	112	95	129	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	88	75	101	6.50	13.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	14.2	12.1	16.3	1.05	2.10	Glucose oxidase
	mg/dl	256	218	294	19.00	38.00	
Iron	µmol/l	35.9	29.5	42.3	3.20	6.40	Colorimetric without ppt.
	µg/dl	201	165	237	18.00	36.00	
Magnesium	mmol/l	1.86	1.63	2.09	0.12	0.23	Enzymatic
	mg/dl	4.52	3.96	5.08	0.28	0.56	
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	5.91	5.43	6.39	0.24	0.48	ISE method - indirect
Protein Total	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction end point
	g/dl	4.59	3.67	5.51	0.46	0.92	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	257	216	298	20.50	41.00	

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease end point
	mg/dl	115	97.4	133	8.80	17.60	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.51	8.27	10.8	0.62	1.24	

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

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.8	24.5	33.1	2.15	4.30	Bromocresol Green
	g/dl	2.88	2.45	3.31	0.22	0.43	
Alkaline Phosphatase	U/l	493	419	567	37.00	74.00	Diethanolamine buffer DEA 37°C
	U/l	384	326	442	29.00	58.00	Diethanolamine buffer DEA 30°C
	U/l	315	268	362	23.50	47.00	Diethanolamine buffer DEA 25°C
	U/l	291	248	334	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	227	193	261	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	61	93	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	102	82	122	10.00	20.00	Tris buffer without P5P 30°C
	U/l	72	58	86	7.00	14.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	45.4	36.3	54.5	4.55	9.10	Enzymatic Colorimetric
Bilirubin Total	µmol/l	84.3	66.6	102	8.85	17.70	Diazo with Sulphanilic Acid
	mg/dl	4.93	3.90	5.96	0.52	1.03	
	µmol/l	78.6	62.1	95.1	8.25	16.50	Nitrobenzenediazonium salt
	mg/dl	4.60	3.63	5.57	0.49	0.97	
Calcium	mmol/l	3.31	2.98	3.64	0.17	0.33	Arsenazo III
	mg/dl	13.3	11.9	14.7	0.70	1.40	

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

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	115	106	124	4.50	9.00	ISE direct
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	544	446	642	49.00	98.00	CK-NAC (IFCC) 37°C
	U/l	341	279	403	31.00	62.00	CK-NAC (IFCC) 30°C
	U/l	231	190	272	20.50	41.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	376	301	451	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	394	315	473	39.50	79.00	Enzymatic UV method
	mg/dl	4.45	3.56	5.34	0.45	0.89	
gamma-GT	U/l	154	131	177	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	121	103	139	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	95	81	109	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.48	2.11	2.85	0.19	0.37	Direct HDL PEGME
	mg/dl	95.7	81.4	110	7.15	14.30	
Iron	µmol/l	36.6	30.0	43.2	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
LD (LDH)	U/l	729	619	839	55.00	110.00	P->L Scandinavian & Dutch 37°C
	U/l	526	447	605	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
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	

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

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Potassium	mmol/l	5.75	5.29	6.21	0.23	0.46	ISE method - direct
Protein Total	g/l	46.9	37.5	56.3	4.70	9.40	Biuret reaction end point
	g/dl	4.69	3.75	5.63	0.47	0.94	
Sodium	mmol/l	153	146	160	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	
Urea	mmol/l	17.5	14.9	20.1	1.30	2.60	Urease end point
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease kinetic
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.0	15.3	20.7	1.35	2.70	BUN
	mg/dl	50.5	42.9	58.1	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.60	0.53	0.68	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.1	8.82	11.4	0.64	1.28	
	mmol/l	0.61	0.53	0.69	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.2	8.85	11.6	0.68	1.35	
	mmol/l	0.60	0.52	0.68	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	10.1	8.77	11.4	0.67	1.33	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	415	328	502	43.50	87.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	313	248	378	32.50	65.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	235	186	284	24.50	49.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (non-prostatic)	U/l	13.5	9.05	18.0	2.23	4.45	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Prostatic)	U/l	28.6	19.2	38.0	4.70	9.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Acid Phosphatase (Total)	U/l	42.1	28.2	56.0	6.95	13.90	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	29.5	25.0	34.0	2.25	4.50	Bromocresol Green
	g/dl	2.95	2.50	3.40	0.23	0.45	
	g/l	28.2	24.0	32.4	2.10	4.20	Bromocresol Purple
	g/dl	2.82	2.40	3.24	0.21	0.42	
	g/l	28.0	23.8	32.2	2.10	4.20	Ortho Vitros Microslide Systems
	g/dl	2.80	2.38	3.22	0.21	0.42	
	g/l	27.0	22.9	31.1	2.05	4.10	Turbidimetric Assays
	g/dl	2.70	2.29	3.11	0.21	0.41	
Alkaline Phosphatase	U/l	232	197	267	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	470	400	540	35.00	70.00	Diethanolamine buffer DEA 37°C
	U/l	366	312	420	27.00	54.00	Diethanolamine buffer DEA 30°C
	U/l	300	256	344	22.00	44.00	Diethanolamine buffer DEA 25°C
	U/l	325	276	374	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	253	215	291	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	208	176	240	16.00	32.00	AMP optimised to IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	311	264	358	23.50	47.00	AMP non-optimised 37°C
	U/l	242	206	278	18.00	36.00	AMP non-optimised 30°C
	U/l	199	169	229	15.00	30.00	AMP non-optimised 25°C
ALT (GPT)	U/l	118	95	141	11.50	23.00	Colorimetric 37°C
	U/l	87	70	104	8.50	17.00	Colorimetric 30°C
	U/l	66	53	79	6.50	13.00	Colorimetric 25°C
	U/l	140	112	168	14.00	28.00	Ortho Vitros Microslide Systems 37°C
	U/l	166	133	199	16.50	33.00	Tris buffer with P5P 37°C
	U/l	123	98	148	12.50	25.00	Tris buffer with P5P 30°C
	U/l	93	75	111	9.00	18.00	Tris buffer with P5P 25°C
	U/l	123	99	147	12.00	24.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer without P5P 25°C
	U/l	119	95	143	12.00	24.00	Tris buffer SCE 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer SCE 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer SCE 25°C
	U/l	137	110	164	13.50	27.00	Agappee - IFCC 37°C
	U/l	101	81	121	10.00	20.00	Agappee - IFCC 30°C
	U/l	77	62	92	7.50	15.00	Agappee - IFCC 25°C
Amylase Pancreatic	U/l	216	184	248	16.00	32.00	Immunoinhibition EPS substrate 37°C
	U/l	213	181	245	16.00	32.00	Roche EPS Liquid 37°C
	U/l	252	214	290	19.00	38.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	241	204	278	18.50	37.00	pNP Maltotrioside substrates 37°C
	U/l	247	210	284	18.50	37.00	Siemens - blocked pNPG7 37°C
	U/l	200	170	230	15.00	30.00	Randox Lyo. Ethylidene pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	277	235	319	21.00	42.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	243	206	280	18.50	37.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	247	210	284	18.50	37.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	293	249	337	22.00	44.00	Siemens - maltopenta/hexaoside 37°C
	U/l	239	203	275	18.00	36.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	157	133	181	12.00	24.00	Ortho Vitros Microslide Systems 37°C
	U/l	237	201	273	18.00	36.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	235	200	270	17.50	35.00	Roche liquid stable pNPG7 37°C
	U/l	296	252	340	22.00	44.00	Siemens 2-chloro-pNPG3 37°C
	U/l	284	241	327	21.50	43.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	248	211	285	18.50	37.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	255	217	293	19.00	38.00	Beckman Synchron AMY7 37°C
	U/l	254	216	292	19.00	38.00	I.L. 2-chloro-pNPG3 37°C
	U/l	281	238	324	21.50	43.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	312	265	359	23.50	47.00	Abbott Architect IFCC Cal. 37°C
	U/l	231	197	265	17.00	34.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.05	0.86	1.24	0.09	0.19	Immunoturbidimetric
	mg/dl	105	86.1	124	9.45	18.90	
Apolipoprotein B	g/l	0.57	0.46	0.67	0.05	0.10	Immunoturbidimetric
	mg/dl	56.6	46.4	66.8	5.10	10.20	
AST (GOT)	U/l	126	101	151	12.50	25.00	Colorimetric 37°C
	U/l	85	68	102	8.50	17.00	Colorimetric 30°C
	U/l	60	48	72	6.00	12.00	Colorimetric 25°C
	U/l	178	143	213	17.50	35.00	Ortho Vitros Microslide visible slide 37°C
	U/l	203	162	244	20.50	41.00	Tris buffer with P5P 37°C
	U/l	137	110	164	13.50	27.00	Tris buffer with P5P 30°C
	U/l	97	77	117	10.00	20.00	Tris buffer with P5P 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	133	107	159	13.00	26.00	Tris buffer without P5P 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 30°C
	U/l	63	51	75	6.00	12.00	Tris buffer without P5P 25°C
	U/l	128	102	154	13.00	26.00	Tris buffer SCE 37°C
	U/l	87	69	105	9.00	18.00	Tris buffer SCE 30°C
	U/l	61	49	73	6.00	12.00	Tris buffer SCE 25°C
	U/l	145	116	174	14.50	29.00	Agappee - IFCC 37°C
	U/l	98	78	118	10.00	20.00	Agappee - IFCC 30°C
	U/l	69	55	83	7.00	14.00	Agappee - IFCC 25°C
Bicarbonate	mmol/l	16.7	13.3	20.1	1.70	3.40	Colorimetric
	mmol/l	18.4	14.6	22.2	1.90	3.80	Ortho Vitros Microslide Systems
	mmol/l	16.4	13.0	19.8	1.70	3.40	Differential rate pH change
	mmol/l	16.9	13.4	20.4	1.75	3.50	Enzymatic
	mmol/l	16.8	13.3	20.3	1.75	3.50	Ion selective electrode
Bile Acids	µmol/l	41.2	33.0	49.4	4.10	8.20	4th Generation Colorimetric
	µmol/l	43.6	34.9	52.3	4.35	8.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	28.4	22.4	34.4	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.66	1.31	2.01	0.18	0.35	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	27.4	21.6	33.2	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.60	1.26	1.94	0.17	0.34	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	31.6	25.0	38.2	3.30	6.60	Modified Jendrassik
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Bilirubin Total	µmol/l	76.3	60.3	92.3	8.00	16.00	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.46	3.53	5.39	0.47	0.93	
	µmol/l	96.3	76.1	117	10.10	20.20	Diazo with Dichloroaniline (DCA)
	mg/dl	5.63	4.45	6.81	0.59	1.18	
	µmol/l	82.4	65.1	99.7	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.82	3.81	5.83	0.51	1.01	
	µmol/l	95.5	75.4	116	10.05	20.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.59	4.41	6.77	0.59	1.18	
	µmol/l	78.6	62.1	95.1	8.25	16.50	Nitrobenzenediazonium salt
	mg/dl	4.60	3.63	5.57	0.49	0.97	
	µmol/l	77.8	61.4	94.2	8.20	16.40	Diazonium ion
	mg/dl	4.55	3.59	5.51	0.48	0.96	
	µmol/l	88.3	69.8	107	9.25	18.50	Oxidation to Biliverdin/Vanadate
	mg/dl	5.17	4.08	6.26	0.55	1.09	
	µmol/l	97.2	76.8	118	10.20	20.40	Modified Jendrassik
	mg/dl	5.69	4.49	6.89	0.60	1.20	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.20	2.88	3.52	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.17	2.86	3.48	0.16	0.31	Ion selective electrode
	mg/dl	12.7	11.5	13.9	0.60	1.20	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.24	2.92	3.56	0.16	0.32	Methylthymol blue
	mg/dl	13.0	11.7	14.3	0.65	1.30	
	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
	mmol/l	3.26	2.94	3.58	0.16	0.32	NM-BAPTA
	mg/dl	13.1	11.8	14.4	0.65	1.30	
	mmol/l	0.99	0.89	1.09	0.05	0.10	Ionised calcium
	mg/dl	3.98	3.58	4.38	0.20	0.40	
Chloride	mmol/l	117	107	127	5.00	10.00	Colorimetric
	mmol/l	115	106	124	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	113	104	122	4.50	9.00	ISE indirect
	mmol/l	114	105	123	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.67	5.80	7.54	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	257	224	290	16.50	33.00	
	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	5463	4371	6555	546.00	1092.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	456	374	538	41.00	82.00	Ortho Vitros Microslide Systems 37°C
	U/l	563	461	665	51.00	102.00	CK-NAC serum start (DGKC) 37°C
	U/l	352	289	415	31.50	63.00	CK-NAC serum start (DGKC) 30°C
	U/l	239	196	282	21.50	43.00	CK-NAC serum start (DGKC) 25°C
	U/l	542	445	639	48.50	97.00	CK-NAC substrate start (DGKC) 37°C
	U/l	339	279	399	30.00	60.00	CK-NAC substrate start (DGKC) 30°C
	U/l	230	189	271	20.50	41.00	CK-NAC substrate start (DGKC) 25°C
	U/l	545	447	643	49.00	98.00	CK-NAC (IFCC) 37°C
	U/l	341	280	402	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	232	190	274	21.00	42.00	CK-NAC (IFCC) 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	566	464	668	51.00	102.00	Monothioglycerol 37°C
	U/l	354	290	418	32.00	64.00	Monothioglycerol 30°C
	U/l	241	197	285	22.00	44.00	Monothioglycerol 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	26.4	21.1	31.7	2.65	5.30	Colorimetric
	µg/dl	168	134	202	17.00	34.00	
Cortisol	nmol/l	916	687	1145	114.50	229.00	Roche Cobas E411
	µg/dl	33.0	24.7	41.3	4.15	8.30	
Creatinine	µmol/l	336	269	403	33.50	67.00	Alkaline picrate with deproteinization
	mg/dl	3.80	3.04	4.56	0.38	0.76	
	µmol/l	363	291	435	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.10	3.29	4.91	0.41	0.81	
	µmol/l	382	306	458	38.00	76.00	Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	388	311	465	38.50	77.00	Creatinine PAP method
	mg/dl	4.38	3.51	5.25	0.44	0.87	
	µmol/l	373	298	448	37.50	75.00	Jaffe rate blanked
	mg/dl	4.21	3.37	5.05	0.42	0.84	
	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	
	µmol/l	377	302	452	37.50	75.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.26	3.41	5.11	0.43	0.85	

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	368	295	441	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.16	3.33	4.99	0.42	0.83	
	µmol/l	376	301	451	37.50	75.00	Vitros IDMS Traceable
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	380	304	456	38.00	76.00	IDMS traceable
	mg/dl	4.29	3.44	5.14	0.43	0.85	
D-3-Hydroxybutyrate	mmol/l	1.11	0.94	1.28	0.08	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.84	3.07	4.61	0.39	0.77	Immunoturbidimetric
	ng/ml	3.00	2.40	3.60	0.30	0.60	
Folate	nmol/l	20.1	15.3	24.9	2.40	4.80	Roche Cobas E411
	ng/ml	8.86	6.75	11.0	1.06	2.11	
Free T4	pmol/l	43.9	32.9	54.9	5.50	11.00	Abbott Architect
	ng/dl	3.42	2.57	4.27	0.43	0.85	
	pg/ml	34.2	25.7	42.7	4.25	8.50	Abbott Architect
	pmol/l	55.9	42.0	69.8	6.95	13.90	Siemens Centaur XP/XPT/Classic
	ng/dl	4.36	3.28	5.44	0.54	1.08	
	pg/ml	43.6	32.8	54.4	5.40	10.80	Siemens Centaur XP/XPT/Classic
	pmol/l	56.1	42.1	70.1	7.00	14.00	Beckman Access
	ng/dl	4.38	3.28	5.48	0.55	1.10	
	pg/ml	43.8	32.8	54.8	5.50	11.00	Beckman Access
	pmol/l	61.2	45.9	76.5	7.65	15.30	Beckman DxI800
	ng/dl	4.77	3.58	5.96	0.60	1.19	
	pg/ml	47.7	35.8	59.6	5.95	11.90	Beckman DxI800
	pmol/l	61.0	45.8	76.2	7.60	15.20	Siemens Immulite 2000/2500
	ng/dl	4.76	3.57	5.95	0.60	1.19	
	pg/ml	47.6	35.7	59.5	5.95	11.90	Siemens Immulite 2000/2500

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	88.2	66.2	110	11.00	22.00	Vitros ECi
	ng/dl	6.88	5.16	8.60	0.86	1.72	
	pg/ml	68.8	51.6	86.0	8.60	17.20	Vitros ECi
	pmol/l	63.9	48.0	79.8	7.95	15.90	Roche Elecsys
	ng/dl	4.98	3.74	6.22	0.62	1.24	
	pg/ml	49.8	37.4	62.2	6.20	12.40	Roche Elecsys
	pmol/l	64.9	48.7	81.1	8.10	16.20	Roche Cobas E411
	ng/dl	5.06	3.80	6.32	0.63	1.26	
	pg/ml	50.6	38.0	63.2	6.30	12.60	Roche Cobas E411
	pmol/l	63.6	47.7	79.5	7.95	15.90	Roche Cobas 6000/8000
	ng/dl	4.96	3.72	6.20	0.62	1.24	
	pg/ml	49.6	37.2	62.0	6.20	12.40	Roche Cobas 6000/8000
	pmol/l	63.9	47.9	79.9	8.00	16.00	Biomerieux Vidas FT4N Kit
	ng/dl	4.98	3.74	6.22	0.62	1.24	
	pg/ml	49.8	37.4	62.2	6.20	12.40	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	16.9	13.5	20.3	1.70	3.40	Immunoturbidimetric
	µg/ml	8.08	6.45	9.71	0.82	1.63	
gamma-GT	U/l	148	126	170	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	117	99	135	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	91	78	104	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	196	166	226	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	129	110	148	9.50	19.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	102	87	117	7.50	15.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	80	68	92	6.00	12.00	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. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	157	133	181	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	124	105	143	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	82	112	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	166	141	191	12.50	25.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	131	111	151	10.00	20.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	87	117	7.50	15.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	27	21	33	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	21	16	26	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	13	21	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	13.9	11.8	16.0	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	250	213	287	18.50	37.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose dehydrogenase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.0	12.7	17.3	1.15	2.30	Oxygen electrode
	mg/dl	270	229	311	20.50	41.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.34	1.99	2.69	0.18	0.35	Direct HDL PPD
	mg/dl	90.3	76.8	104	6.75	13.50	
	mmol/l	2.34	1.99	2.69	0.18	0.35	Direct HDL Immunoseparation
	mg/dl	90.3	76.8	104	6.75	13.50	
	mmol/l	1.90	1.61	2.19	0.15	0.29	Vitros Magnetic HDL
	mg/dl	73.3	62.1	84.5	5.60	11.20	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.43	2.07	2.79	0.18	0.36	Direct HDL PEGME
	mg/dl	93.8	79.9	108	6.95	13.90	
	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	
	mmol/l	1.98	1.68	2.28	0.15	0.30	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	76.4	64.8	88.0	5.80	11.60	
	mmol/l	2.36	2.01	2.71	0.18	0.35	Direct HDL Roche 3rd generation
	mg/dl	91.1	77.6	105	6.75	13.50	
	mmol/l	2.22	1.89	2.55	0.17	0.33	HDL - Ultra
	mg/dl	85.7	73.0	98.4	6.35	12.70	
Immunoglobulin A	g/l	1.61	1.21	2.01	0.20	0.40	Immunoturbidimetric
	mg/dl	161	121	201	20.00	40.00	
Immunoglobulin G	g/l	5.50	4.51	6.49	0.50	0.99	Immunoturbidimetric
	mg/dl	550	451	649	49.50	99.00	
Immunoglobulin M	g/l	0.76	0.61	0.91	0.08	0.15	Immunoturbidimetric
	mg/dl	75.7	60.6	90.8	7.55	15.10	
Iron	µmol/l	35.7	29.3	42.1	3.20	6.40	Colorimetric with ppt.
	µg/dl	200	164	236	18.00	36.00	
	µmol/l	35.9	29.5	42.3	3.20	6.40	Colorimetric without ppt.
	µg/dl	201	165	237	18.00	36.00	
	µmol/l	37.2	30.5	43.9	3.35	6.70	Ortho Vitros Microslide Systems
	µg/dl	208	170	246	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	
	mmol/l	4.83	3.96	5.70	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	43.5	35.7	51.3	3.90	7.80	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	5.33	4.37	6.29	0.48	0.96	Enzymatic Electrode
	mg/dl	48.0	39.4	56.6	4.30	8.60	
	mmol/l	5.35	4.38	6.32	0.49	0.97	UV LDH
	mg/dl	48.2	39.5	56.9	4.35	8.70	
LAP	U/l	15	13	17	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1014	862	1166	76.00	152.00	Ortho Vitros Microslide Systems 37°C
	U/l	322	274	370	24.00	48.00	L->P 37°C
	U/l	232	198	266	17.00	34.00	L->P 30°C
	U/l	163	139	187	12.00	24.00	L->P 25°C
	U/l	783	666	900	58.50	117.00	P->L Scandinavian & Dutch 37°C
	U/l	565	481	649	42.00	84.00	P->L Scandinavian & Dutch 30°C
	U/l	397	338	456	29.50	59.00	P->L Scandinavian & Dutch 25°C
	U/l	683	580	786	51.50	103.00	P->L German methods 37°C
	U/l	493	419	567	37.00	74.00	P->L German methods 30°C
	U/l	346	294	398	26.00	52.00	P->L German methods 25°C
	U/l	685	582	788	51.50	103.00	P->L SFBC 37°C
	U/l	495	420	570	37.50	75.00	P->L SFBC 30°C
	U/l	347	295	399	26.00	52.00	P->L SFBC 25°C
	U/l	358	305	411	26.50	53.00	L->P IFCC 37°C
	U/l	258	220	296	19.00	38.00	L->P IFCC 30°C
	U/l	182	155	209	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	107	86	128	10.50	21.00	Other Colorimetric 37°C
	U/l	881	707	1055	87.00	174.00	Ortho Vitros Microslide Systems 37°C
	U/l	72	58	86	7.00	14.00	Roche Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	82	65	99	8.50	17.00	Randox Colorimetric 37°C
	U/l	353	283	423	35.00	70.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
	U/l	413	331	495	41.00	82.00	Randox Turbidimetric with colipase 37°C
Lithium	mmol/l	2.46	2.16	2.76	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	1.71	1.50	1.92	0.11	0.21	
	mmol/l	2.11	1.86	2.36	0.13	0.25	Flame photometry
	mg/dl	1.47	1.29	1.65	0.09	0.18	
	mmol/l	2.17	1.91	2.43	0.13	0.26	Ion selective electrode
	mg/dl	1.51	1.33	1.69	0.09	0.18	
	mmol/l	2.09	1.84	2.34	0.13	0.25	Spectrophotometric
	mg/dl	1.45	1.28	1.62	0.09	0.17	
	mmol/l	1.95	1.72	2.18	0.12	0.23	Randox Colorimetric
	mg/dl	1.35	1.19	1.51	0.08	0.16	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Arsenazo III
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.28	3.77	4.79	0.26	0.51	
	mmol/l	1.72	1.52	1.92	0.10	0.20	Calmagite
	mg/dl	4.18	3.69	4.67	0.25	0.49	
	mmol/l	1.78	1.57	1.99	0.11	0.21	Xylidyl Blue
	mg/dl	4.33	3.82	4.84	0.26	0.51	
	mmol/l	1.77	1.55	1.99	0.11	0.22	Methylthymol blue
	mg/dl	4.30	3.77	4.83	0.27	0.53	
	mmol/l	1.77	1.55	1.99	0.11	0.22	Chlorphosphonazo III
	mg/dl	4.30	3.77	4.83	0.27	0.53	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Enzymatic
	mg/dl	4.30	3.79	4.81	0.26	0.51	
NEFA	mmol/l	0.50	0.43	0.58	0.04	0.08	Colorimetric
Osmolality	mOsm/kg	342	274	410	34.00	68.00	Calculated
	mOsm/kg	372	298	446	37.00	74.00	Freezing point depression
Paracetamol	mmol/l	0.60	0.48	0.72	0.06	0.12	Colorimetric
	mg/l	90.5	72.3	109	9.10	18.20	
Phosphate Inorganic	mmol/l	2.23	1.90	2.56	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.91	5.89	7.93	0.51	1.02	
	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.94	5.89	7.99	0.53	1.05	
	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	5.86	5.39	6.33	0.24	0.47	Ortho Vitros Microslide Systems
	mmol/l	6.01	5.53	6.49	0.24	0.48	Enzymatic
	mmol/l	5.88	5.41	6.35	0.24	0.47	Flame photometry
	mmol/l	5.85	5.38	6.32	0.24	0.47	ISE method - direct
	mmol/l	5.92	5.45	6.39	0.24	0.47	ISE method - indirect
	mmol/l	5.81	5.34	6.28	0.24	0.47	Colorimetric
Protein Total	g/l	46.6	37.3	55.9	4.65	9.30	Ortho Vitros Microslide Systems
	g/dl	4.66	3.73	5.59	0.47	0.93	
	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	44.6	35.7	53.5	4.45	8.90	Biuret reaction kinetic
	g/dl	4.46	3.57	5.35	0.45	0.89	

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	16.3	12.2	20.4	2.05	4.10	Roche Elecsys Modular E170
	ng/ml =	13.9	10.5	17.3	1.70	3.40	Beckman Access standardised to Hybritech
	ng/ml =	15.2	11.4	19.0	1.90	3.80	bioMerieux VIDAS TPSA
	ng/ml =	12.9	9.64	16.2	1.63	3.26	Siemens Centaur XP/XPT/Classic
	ng/ml =	14.4	10.8	18.0	1.80	3.60	Siemens Immulite 2000 1st Generation
	ng/ml =	13.5	10.1	16.9	1.70	3.40	Abbott Architect
	ng/ml =	16.8	12.6	21.0	2.10	4.20	Cobas E411
	ng/ml =	16.0	12.0	20.0	2.00	4.00	Roche Cobas 6000/8000
	ng/ml =	14.8	11.1	18.5	1.85	3.70	Ortho Vitros 3600/5600/ECi PSA II
Salicylate	mmol/l	0.81	0.65	0.97	0.08	0.16	Enzymatic
	mg/dl	11.2	8.96	13.4	1.12	2.24	
Sodium	mmol/l	157	149	165	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	154	146	162	4.00	8.00	Enzymatic
	mmol/l	156	148	164	4.00	8.00	Flame photometry
	mmol/l	156	148	164	4.00	8.00	ISE method - direct
	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
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 =	0.99	0.79	1.18	0.10	0.20	Abbott Architect
	µU/ml =	1.09	0.87	1.31	0.11	0.22	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.23	0.98	1.48	0.12	0.25	bioMerieux VIDAS TSH
	µU/ml =	1.24	0.99	1.49	0.13	0.25	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.17	0.93	1.41	0.12	0.24	Vitros ECi
	µU/ml =	1.33	1.07	1.59	0.13	0.26	Roche Elecsys
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Cobas E411

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.33	1.06	1.60	0.14	0.27	Roche Cobas 6000/8000
	µU/ml =	1.08	0.86	1.30	0.11	0.22	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	48.0	37.9	58.1	5.05	10.10	Removal of excess free iron
	µg/dl	268	212	324	28.00	56.00	
	µmol/l	53.2	42.0	64.4	5.60	11.20	FE+UIBC(saturation with iron)
	µg/dl	297	235	359	31.00	62.00	
	µmol/l	50.9	40.2	61.6	5.35	10.70	Direct Colorimetric
	µg/dl	285	225	345	30.00	60.00	
	µmol/l	41.6	32.9	50.3	4.35	8.70	Calculated from Transferrin
	µg/dl	233	184	282	24.50	49.00	
	µmol/l	53.2	42.0	64.4	5.60	11.20	Randox Direct
	µg/dl	297	235	359	31.00	62.00	
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	3.28	2.46	4.10	0.41	0.82	Abbott Architect
	ng/ml	2.14	1.60	2.68	0.27	0.54	
	ng/dl	214	160	268	27.00	54.00	Abbott Architect
	nmol/l	3.43	2.57	4.29	0.43	0.86	Beckman Access
	ng/ml	2.23	1.67	2.79	0.28	0.56	
	ng/dl	223	167	279	28.00	56.00	Beckman Access
	nmol/l	4.72	3.54	5.90	0.59	1.18	Siemens Centaur XP/XPT/Classic
	ng/ml	3.07	2.30	3.84	0.39	0.77	
	ng/dl	307	230	384	38.50	77.00	Siemens Centaur XP/XPT/Classic
	nmol/l	3.92	2.94	4.90	0.49	0.98	BioMerieux Vidas
	ng/ml	2.55	1.91	3.19	0.32	0.64	
	ng/dl	255	191	319	32.00	64.00	BioMerieux Vidas

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	4.05	3.04	5.06	0.51	1.01	Siemens Immulite 2000/2500
	ng/ml	2.64	1.98	3.30	0.33	0.66	
	ng/dl	264	198	330	33.00	66.00	Siemens Immulite 2000/2500
	nmol/l	4.21	3.16	5.26	0.53	1.05	Roche Cobas E411
	ng/ml	2.74	2.06	3.42	0.34	0.68	
	ng/dl	274	206	342	34.00	68.00	Roche Cobas E411
	nmol/l	4.19	3.14	5.24	0.53	1.05	Roche Cobas 6000/8000
	ng/ml	2.73	2.04	3.42	0.35	0.69	
	ng/dl	273	204	342	34.50	69.00	Roche Cobas 6000/8000
Total T4	nmol/l	190	143	237	23.50	47.00	Abbott Architect
	µg/dl	14.8	11.2	18.4	1.80	3.60	
	ng/ml	148	112	184	18.00	36.00	Abbott Architect
	nmol/l	197	148	246	24.50	49.00	Siemens Centaur XP/XPT/Classic
	µg/dl	15.4	11.5	19.3	1.95	3.90	
	ng/ml	154	115	193	19.50	39.00	Siemens Centaur XP/XPT/Classic
	nmol/l	194	145	243	24.50	49.00	BioMerieux Vidas
	µg/dl	15.1	11.3	18.9	1.90	3.80	
	ng/ml	151	113	189	19.00	38.00	BioMerieux Vidas
	nmol/l	205	154	256	25.50	51.00	Siemens Immulite 2000/2500
	µg/dl	16.0	12.0	20.0	2.00	4.00	
	ng/ml	160	120	200	20.00	40.00	Siemens Immulite 2000/2500
	nmol/l	183	137	229	23.00	46.00	Roche Cobas E411
	µg/dl	14.3	10.7	17.9	1.80	3.60	
	ng/ml	143	107	179	18.00	36.00	Roche Cobas E411

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	171	128	214	21.50	43.00	Roche Cobas 6000/8000
	µg/dl	13.3	9.98	16.6	1.66	3.32	
	ng/ml	133	99.8	166	16.60	33.20	Roche Cobas 6000/8000
Transferrin	g/l	1.80	1.44	2.16	0.18	0.36	Immunoturbidimetric
	mg/dl	180	144	216	18.00	36.00	
Triglycerides	mmol/l	2.83	2.38	3.28	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	211	289	19.50	39.00	
	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	2.92	2.45	3.39	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	3.13	2.63	3.63	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	277	233	321	22.00	44.00	
UIBC	µmol/l	17.3	14.2	20.4	1.55	3.10	Direct Colorimetric
	µg/dl	96.7	79.4	114	8.65	17.30	
Urea	mmol/l	17.5	14.9	20.1	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	18.4	15.6	21.2	1.40	2.80	Urease end point
	mg/dl	111	93.8	128	8.60	17.20	
	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.3	15.6	21.0	1.35	2.70	Urease hypochlorite
	mg/dl	110	93.8	126	8.10	16.20	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Ortho Vitros Microslide Systems
	mg/dl	9.41	8.18	10.6	0.62	1.23	
	mmol/l	0.59	0.52	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.98	8.69	11.3	0.65	1.29	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.84	8.57	11.1	0.64	1.27	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Spectrophotometric at 280-290
	mg/dl	9.88	8.60	11.2	0.64	1.28	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.64	8.38	10.9	0.63	1.26	
Vitamin B12	pmol/l	229	183	275	23.00	46.00	Roche Cobas E411
	pg/ml	310	248	372	31.00	62.00	
Zinc	µmol/l	35.4	28.3	42.5	3.55	7.10	Atomic absorption
	µg/dl	231	185	277	23.00	46.00	
	µmol/l	38.0	30.4	45.6	3.80	7.60	Colorimetric with deproteinisation
	µg/dl	248	199	297	24.50	49.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin (electrophoresis)		61.5	55.4	67.6	3.05	6.10	% 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		5.3	4.0	6.6	0.64	1.27	% of total Protein (Beckman Capillary)
beta-globulin		13.0	9.9	16.1	1.56	3.12	% 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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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.2	25.7	34.7	2.25	4.50	Bromocresol Green
	g/dl	3.02	2.57	3.47	0.23	0.45	
Alkaline Phosphatase	U/l	443	377	509	33.00	66.00	Diethanolamine buffer DEA 37°C
	U/l	345	294	396	25.50	51.00	Diethanolamine buffer DEA 30°C
	U/l	283	241	325	21.00	42.00	Diethanolamine buffer DEA 25°C
	U/l	331	281	381	25.00	50.00	AMP optimised to IFCC 37°C
	U/l	258	219	297	19.50	39.00	AMP optimised to IFCC 30°C
	U/l	212	180	244	16.00	32.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	66	52	80	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Bilirubin Total	µmol/l	86.4	68.2	105	9.10	18.20	Diazo with Sulphanilic Acid
	mg/dl	5.05	3.99	6.11	0.53	1.06	
	µmol/l	73.5	58.1	88.9	7.70	15.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.30	3.40	5.20	0.45	0.90	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	84.7	66.9	103	8.90	17.80	Oxidation to Biliverdin/Vanadate
	mg/dl	4.95	3.91	5.99	0.52	1.04	
Calcium	mmol/l	3.04	2.74	3.34	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.23	2.91	3.55	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.7	14.1	0.60	1.20	
Cholesterol	mmol/l	7.11	6.19	8.03	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
CK Total	U/l	562	461	663	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	352	289	415	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	239	196	282	21.50	43.00	CK-NAC (IFCC) 25°C
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	
	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	349	279	419	35.00	70.00	Jaffe rate blanked
	mg/dl	3.94	3.15	4.73	0.40	0.79	
gamma-GT	U/l	140	119	161	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	110	94	126	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	86	73	99	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	157	134	180	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	124	106	142	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	83	111	7.00	14.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	14.9	12.7	17.1	1.10	2.20	Hexokinase
	mg/dl	268	229	307	19.50	39.00	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	2.37	2.01	2.73	0.18	0.36	Direct HDL PPD
	mg/dl	91.5	77.6	105	6.95	13.90	
	mmol/l	2.29	1.95	2.63	0.17	0.34	Direct Clearance Method
	mg/dl	88.4	75.3	102	6.55	13.10	
Iron	µmol/l	34.6	28.4	40.8	3.10	6.20	Colorimetric without ppt.
	µg/dl	193	159	227	17.00	34.00	
LD (LDH)	U/l	699	594	804	52.50	105.00	P->L SFBC 37°C
	U/l	505	429	581	38.00	76.00	P->L SFBC 30°C
	U/l	354	301	407	26.50	53.00	P->L SFBC 25°C
	U/l	353	300	406	26.50	53.00	L->P IFCC 37°C
	U/l	255	217	293	19.00	38.00	L->P IFCC 30°C
	U/l	179	152	206	13.50	27.00	L->P IFCC 25°C
Magnesium	mmol/l	1.62	1.42	1.82	0.10	0.20	Xylidyl Blue
	mg/dl	3.94	3.45	4.43	0.25	0.49	
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	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
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	44.5	35.6	53.4	4.45	8.90	Biuret reaction kinetic
	g/dl	4.45	3.56	5.34	0.45	0.89	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease end point
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	17.9	15.2	20.6	1.35	2.70	Urease hypochlorite
	mg/dl	108	91.4	125	8.30	16.60	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.60	0.52	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.0	8.72	11.3	0.64	1.28	
	mmol/l	0.61	0.53	0.68	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.2	8.84	11.6	0.68	1.36	
	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. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.0	23.8	32.2	2.10	4.20	Ortho Vitros Microslide Systems
	g/dl	2.80	2.38	3.22	0.21	0.42	
Alkaline Phosphatase	U/l	232	197	267	17.50	35.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	157	133	181	12.00	24.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	178	143	213	17.50	35.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	76.3	60.3	92.3	8.00	16.00	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.46	3.53	5.39	0.47	0.93	
	µmol/l	75.6	59.7	91.5	7.95	15.90	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.42	3.49	5.35	0.47	0.93	
Bilirubin, Unconjugated Vitros BU	µmol/l	72.4	57.2	87.6	7.60	15.20	BuBc Vitros Slide
	mg/dl	4.24	3.35	5.13	0.45	0.89	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.29	2.96	3.62	0.17	0.33	Vitros DT60/DT60 II/DTSC II
	mg/dl	13.2	11.9	14.5	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	116	107	125	4.50	9.00	Vitros DT60/DT60 II/DTE II
Cholesterol	mmol/l	6.67	5.80	7.54	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	257	224	290	16.50	33.00	

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholinesterase	U/l	5152	4122	6182	515.00	1030.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	456	374	538	41.00	82.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	377	302	452	37.50	75.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.26	3.41	5.11	0.43	0.85	
	µmol/l	376	301	451	37.50	75.00	Vitros IDMS Traceable
	mg/dl	4.25	3.40	5.10	0.43	0.85	
gamma-GT	U/l	196	166	226	15.00	30.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	13.9	11.8	16.0	1.05	2.10	Ortho Vitros Microslide Systems
	mg/dl	250	213	287	18.50	37.00	
HDL - Cholesterol	mmol/l	1.90	1.61	2.19	0.15	0.29	Vitros Magnetic HDL
	mg/dl	73.3	62.1	84.5	5.60	11.20	
	mmol/l	1.99	1.69	2.29	0.15	0.30	Vitros 5.1 FS microtip assay
	mg/dl	76.8	65.2	88.4	5.80	11.60	
	mmol/l	1.98	1.68	2.28	0.15	0.30	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	76.4	64.8	88.0	5.80	11.60	
Iron	µmol/l	37.2	30.5	43.9	3.35	6.70	Ortho Vitros Microslide Systems
	µg/dl	208	170	246	19.00	38.00	
Lactate	mmol/l	4.83	3.96	5.70	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	43.5	35.7	51.3	3.90	7.80	
LD (LDH)	U/l	1014	862	1166	76.00	152.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	881	707	1055	87.00	174.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.23	1.90	2.56	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.91	5.89	7.93	0.51	1.02	

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RANDOX

Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	5.86	5.39	6.33	0.24	0.47	Ortho Vitros Microslide Systems
	mmol/l	5.71	5.25	6.17	0.23	0.46	Vitros DT60/DT60 II/DTE II
Protein Total	g/l	46.6	37.3	55.9	4.65	9.30	Ortho Vitros Microslide Systems
	g/dl	4.66	3.73	5.59	0.47	0.93	
PSA Total	ng/ml =	14.8	11.1	18.5	1.85	3.70	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	157	149	165	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.17	0.93	1.41	0.12	0.24	Vitros ECi
Triglycerides	mmol/l	3.13	2.63	3.63	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	277	233	321	22.00	44.00	
Urea	mmol/l	17.5	14.9	20.1	1.30	2.60	Ortho Vitros Microslide Systems
	mg/dl	105	89.5	121	7.75	15.50	
	mmol/l	17.5	14.9	20.1	1.30	2.60	BUN
	mg/dl	49.1	41.7	56.5	3.70	7.40	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Ortho Vitros Microslide Systems
	mg/dl	9.41	8.18	10.6	0.62	1.23	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.0	25.5	34.5	2.25	4.50	Bromocresol Green
	g/dl	3.00	2.55	3.45	0.23	0.45	
Alkaline Phosphatase	U/l	454	385	523	34.50	69.00	Diethanolamine buffer DEA 37°C
	U/l	354	300	408	27.00	54.00	Diethanolamine buffer DEA 30°C
	U/l	290	246	334	22.00	44.00	Diethanolamine buffer DEA 25°C
AST (GOT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
	U/l	87	69	105	9.00	18.00	Tris buffer without P5P 30°C
	U/l	61	49	73	6.00	12.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	88.7	70.1	107	9.30	18.60	Oxidation to Biliverdin/Vanadate
	mg/dl	5.19	4.10	6.28	0.55	1.09	
Calcium	mmol/l	3.41	3.07	3.75	0.17	0.34	Arsenazo III
	mg/dl	13.7	12.3	15.1	0.70	1.40	
Cholesterol	mmol/l	7.36	6.41	8.31	0.48	0.95	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
CK Total	U/l	540	442	638	49.00	98.00	CK-NAC (IFCC) 37°C
	U/l	338	277	399	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	230	188	272	21.00	42.00	CK-NAC (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	
Magnesium	mmol/l	1.72	1.51	1.93	0.11	0.21	Xylidyl Blue
	mg/dl	4.18	3.67	4.69	0.26	0.51	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	46.3	37.0	55.6	4.65	9.30	Biuret reaction end point
	g/dl	4.63	3.70	5.56	0.47	0.93	
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	27.1	23.0	31.2	2.05	4.10	Bromocresol Purple
	g/dl	2.71	2.30	3.12	0.21	0.41	
	g/l	26.6	22.6	30.6	2.00	4.00	Turbidimetric Assays
	g/dl	2.66	2.26	3.06	0.20	0.40	
Alkaline Phosphatase	U/l	255	217	293	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	199	169	229	15.00	30.00	Roche Integra AMP buffer 30°C
	U/l	163	139	187	12.00	24.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	212	180	244	16.00	32.00	Roche EPS Liquid 37°C
Amylase Total	U/l	232	197	267	17.50	35.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	233	198	268	17.50	35.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	62	50	74	6.00	12.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.7	13.3	20.1	1.70	3.40	Colorimetric
	mmol/l	16.7	13.2	20.2	1.75	3.50	Enzymatic
Bile Acids	µmol/l	43.9	35.1	52.7	4.40	8.80	Enzymatic Colorimetric

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	28.6	22.6	34.6	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	26.5	21.0	32.0	2.75	5.50	Roche JG factored
	mg/dl	1.55	1.23	1.87	0.16	0.32	
Bilirubin Total	µmol/l	76.4	60.3	92.5	8.05	16.10	Diazo with Sulphanilic Acid
	mg/dl	4.47	3.53	5.41	0.47	0.94	
	µmol/l	77.1	60.9	93.3	8.10	16.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.51	3.56	5.46	0.48	0.95	
	µmol/l	76.8	60.7	92.9	8.05	16.10	Diazonium ion
	mg/dl	4.49	3.55	5.43	0.47	0.94	
Calcium	mmol/l	3.26	2.93	3.59	0.17	0.33	Cresolphthalein complexone
	mg/dl	13.1	11.7	14.5	0.70	1.40	
	mmol/l	3.27	2.95	3.59	0.16	0.32	NM-BAPTA
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.98	6.08	7.88	0.45	0.90	Cholesterol Oxidase
	mg/dl	269	235	303	17.00	34.00	
Cholinesterase	U/l	5296	4237	6355	529.50	1059.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	538	441	635	48.50	97.00	CK-NAC substrate start (DGKC) 37°C
	U/l	337	276	398	30.50	61.00	CK-NAC substrate start (DGKC) 30°C
	U/l	229	187	271	21.00	42.00	CK-NAC substrate start (DGKC) 25°C
	U/l	532	437	627	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	333	274	392	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	226	186	266	20.00	40.00	CK-NAC (IFCC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	379	303	455	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.28	3.42	5.14	0.43	0.86	
	µmol/l	385	308	462	38.50	77.00	Enzymatic UV method
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	388	310	466	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	377	302	452	37.50	75.00	Jaffe rate blanked
	mg/dl	4.26	3.41	5.11	0.43	0.85	
	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	
	µmol/l	378	302	454	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.27	3.41	5.13	0.43	0.86	
D-3-Hydroxybutyrate	mmol/l	1.12	0.95	1.29	0.08	0.17	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	63.6	47.7	79.5	7.95	15.90	Roche Cobas 6000/8000
	ng/dl	4.96	3.72	6.20	0.62	1.24	
	pg/ml	49.6	37.2	62.0	6.20	12.40	Roche Cobas 6000/8000
gamma-GT	U/l	138	117	159	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	109	92	126	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	85	72	98	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	160	136	184	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	126	107	145	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	99	84	114	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	26	20	32	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	20	15	25	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	16	12	20	2.00	4.00	Triethanolamine buffer 50 mmol 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose dehydrogenase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.1	12.9	17.3	1.10	2.20	Hexokinase
	mg/dl	272	232	312	20.00	40.00	
	mmol/l	14.9	12.7	17.1	1.10	2.20	Glucose oxidase
	mg/dl	268	229	307	19.50	39.00	
HDL - Cholesterol	mmol/l	2.33	1.98	2.68	0.18	0.35	Direct HDL PEGME
	mg/dl	89.9	76.4	103	6.75	13.50	
	mmol/l	2.35	1.99	2.71	0.18	0.36	Direct HDL Roche 3rd generation
	mg/dl	90.7	76.8	105	6.95	13.90	
Iron	µmol/l	35.8	29.3	42.3	3.25	6.50	Colorimetric with ppt.
	µg/dl	200	164	236	18.00	36.00	
	µmol/l	35.8	29.4	42.2	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
Lactate	mmol/l	5.29	4.34	6.24	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.7	39.1	56.3	4.30	8.60	
LD (LDH)	U/l	674	573	775	50.50	101.00	P->L German methods 37°C
	U/l	487	414	560	36.50	73.00	P->L German methods 30°C
	U/l	342	291	393	25.50	51.00	P->L German methods 25°C
	U/l	359	305	413	27.00	54.00	L->P IFCC 37°C
	U/l	259	220	298	19.50	39.00	L->P IFCC 30°C
	U/l	182	155	209	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	70	57	83	6.50	13.00	Roche Colorimetric 37°C
	U/l	70	56	84	7.00	14.00	Roche Turbidimetric with colipase 37°C

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	2.09	1.84	2.34	0.13	0.25	Spectrophotometric
	mg/dl	1.45	1.28	1.62	0.09	0.17	
Magnesium	mmol/l	1.78	1.56	2.00	0.11	0.22	Xylidyl Blue
	mg/dl	4.33	3.79	4.87	0.27	0.54	
	mmol/l	1.78	1.56	2.00	0.11	0.22	Chlorphosphonazo III
	mg/dl	4.33	3.79	4.87	0.27	0.54	
Osmolality	mOsm/kg	344	275	413	34.50	69.00	Calculated
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	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	5.97	5.49	6.45	0.24	0.48	ISE method - indirect
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction CX4/5/7
	g/dl	4.60	3.68	5.52	0.46	0.92	
	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction end point
	g/dl	4.53	3.62	5.44	0.46	0.91	
	g/l	44.5	35.6	53.4	4.45	8.90	Biuret reaction kinetic
	g/dl	4.45	3.56	5.34	0.45	0.89	
PSA Total	ng/ml =	16.0	12.0	20.0	2.00	4.00	Roche Cobas 6000/8000
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.33	1.06	1.60	0.14	0.27	Roche Cobas 6000/8000
TIBC	µmol/l	52.9	41.8	64.0	5.55	11.10	FE+UIBC(saturation with iron)
	µg/dl	296	234	358	31.00	62.00	
	µmol/l	49.6	39.2	60.0	5.20	10.40	Direct Colorimetric
	µg/dl	277	219	335	29.00	58.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	43.2	34.1	52.3	4.55	9.10	Calculated from Transferrin
	µg/dl	241	191	291	25.00	50.00	
Total T3	nmol/l	4.19	3.14	5.24	0.53	1.05	Roche Cobas 6000/8000
	ng/ml	2.73	2.04	3.42	0.35	0.69	
	ng/dl	273	204	342	34.50	69.00	Roche Cobas 6000/8000
Total T4	nmol/l	171	128	214	21.50	43.00	Roche Cobas 6000/8000
	µg/dl	13.3	9.98	16.6	1.66	3.32	
	ng/ml	133	99.8	166	16.60	33.20	Roche Cobas 6000/8000
Triglycerides	mmol/l	2.85	2.40	3.30	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
	mmol/l	2.83	2.37	3.29	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.87	2.41	3.33	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	254	213	295	20.50	41.00	
UIBC	µmol/l	17.4	14.3	20.5	1.55	3.10	Direct Colorimetric
	µg/dl	97.3	79.9	115	8.70	17.40	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease end point
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.5	15.8	21.2	1.35	2.70	Urease kinetic
	mg/dl	111	95.0	127	8.00	16.00	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.73	8.47	11.0	0.63	1.26	
	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.76	8.50	11.0	0.63	1.26	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.69	8.43	11.0	0.63	1.26	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			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	
Alkaline Phosphatase	U/l	274	233	315	20.50	41.00	Roche Integra AMP buffer 37°C
	U/l	213	182	244	15.50	31.00	Roche Integra AMP buffer 30°C
	U/l	175	149	201	13.00	26.00	Roche Integra AMP buffer 25°C
	U/l	273	232	314	20.50	41.00	AMP optimised to IFCC 37°C
	U/l	213	181	245	16.00	32.00	AMP optimised to IFCC 30°C
	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	120	96	144	12.00	24.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	54	82	7.00	14.00	Tris buffer without P5P 25°C
Amylase Total	U/l	243	207	279	18.00	36.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 30°C
	U/l	62	50	74	6.00	12.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	29.9	23.7	36.1	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.75	1.39	2.11	0.18	0.36	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	29.6	23.4	35.8	3.10	6.20	Roche JG factored
	mg/dl	1.73	1.37	2.09	0.18	0.36	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	79.7	63.0	96.4	8.35	16.70	Diazo with Sulphanilic Acid
	mg/dl	4.66	3.69	5.63	0.49	0.97	
	µmol/l	75.8	59.9	91.7	7.95	15.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.43	3.50	5.36	0.47	0.93	
	µmol/l	77.1	60.9	93.3	8.10	16.20	Diazonium ion
	mg/dl	4.51	3.56	5.46	0.48	0.95	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	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	
	mmol/l	3.33	2.99	3.67	0.17	0.34	NM-BAPTA
	mg/dl	13.3	12.0	14.6	0.65	1.30	
Chloride	mmol/l	115	105	125	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	
CK Total	U/l	547	448	646	49.50	99.00	CK-NAC (IFCC) 37°C
	U/l	342	280	404	31.00	62.00	CK-NAC (IFCC) 30°C
	U/l	232	190	274	21.00	42.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	328	262	394	33.00	66.00	Alkaline picrate with deproteinization
	mg/dl	3.71	2.96	4.46	0.38	0.75	
	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	379	303	455	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.28	3.42	5.14	0.43	0.86	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	344	275	413	34.50	69.00	Jaffe rate blanked
	mg/dl	3.89	3.11	4.67	0.39	0.78	
	µmol/l	360	288	432	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	356	285	427	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.02	3.22	4.82	0.40	0.80	
gamma-GT	U/l	154	131	177	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	121	103	139	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	95	81	109	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	156	132	180	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	123	104	142	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	96	81	111	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.4	13.0	17.8	1.20	2.40	Hexokinase
	mg/dl	278	234	322	22.00	44.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.41	2.05	2.77	0.18	0.36	Direct HDL Roche 3rd generation
	mg/dl	93.0	79.1	107	6.95	13.90	
Iron	µmol/l	35.6	29.2	42.0	3.20	6.40	Colorimetric without ppt.
	µg/dl	199	163	235	18.00	36.00	
LD (LDH)	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	1.73	1.53	1.93	0.10	0.20	Arsenazo III
	mg/dl	4.20	3.72	4.68	0.24	0.48	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.13	1.81	2.45	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.60	5.61	7.59	0.50	0.99	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	5.82	5.36	6.28	0.23	0.46	ISE method - indirect
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction end point
	g/dl	4.64	3.71	5.57	0.47	0.93	
Sodium	mmol/l	154	147	161	3.50	7.00	ISE method - indirect
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	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease end point
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease kinetic
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.1	15.4	20.8	1.35	2.70	Urease hypochlorite
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.0	15.3	20.7	1.35	2.70	BUN
	mg/dl	50.5	42.9	58.1	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.84	8.55	11.1	0.65	1.29	
	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.74	8.48	11.0	0.63	1.26	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.69	8.43	11.0	0.63	1.26	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.4	25.8	35.0	2.30	4.60	Bromocresol Green
	g/dl	3.04	2.58	3.50	0.23	0.46	
	g/l	27.4	23.3	31.5	2.05	4.10	Bromocresol Purple
	g/dl	2.74	2.33	3.15	0.21	0.41	
Alkaline Phosphatase	U/l	252	214	290	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	196	167	225	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	161	137	185	12.00	24.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	119	95	143	12.00	24.00	Tris buffer without P5P 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	218	185	251	16.50	33.00	Roche EPS Liquid 37°C
Amylase Total	U/l	237	201	273	18.00	36.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 30°C
	U/l	62	50	74	6.00	12.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	27.7	21.9	33.5	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	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	

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	78.8	62.3	95.3	8.25	16.50	Diazo with Sulphanilic Acid
	mg/dl	4.61	3.64	5.58	0.49	0.97	
	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	77.9	61.5	94.3	8.20	16.40	Diazonium ion
	mg/dl	4.56	3.60	5.52	0.48	0.96	
Calcium	mmol/l	3.30	2.97	3.63	0.17	0.33	Cresolphthalein complexone
	mg/dl	13.2	11.9	14.5	0.65	1.30	
	mmol/l	3.27	2.94	3.60	0.17	0.33	NM-BAPTA
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.11	6.19	8.03	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
CK Total	U/l	537	440	634	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	336	275	397	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	228	187	269	20.50	41.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	373	299	447	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	383	306	460	38.50	77.00	Enzymatic UV method
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	396	317	475	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.47	3.58	5.36	0.45	0.89	
	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked
	mg/dl	4.31	3.45	5.17	0.43	0.86	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	382	305	459	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.32	3.45	5.19	0.44	0.87	
gamma-GT	U/l	138	117	159	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	109	92	126	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	85	72	98	6.50	13.00	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
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	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.37	2.01	2.73	0.18	0.36	Direct HDL Roche 3rd generation
	mg/dl	91.5	77.6	105	6.95	13.90	
Iron	µmol/l	35.9	29.4	42.4	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	164	238	18.50	37.00	
Lactate	mmol/l	5.28	4.33	6.23	0.48	0.95	Colorimetric Lactate Oxidase
	mg/dl	47.6	39.0	56.2	4.30	8.60	
LD (LDH)	U/l	663	563	763	50.00	100.00	P->L German methods 37°C
	U/l	479	406	552	36.50	73.00	P->L German methods 30°C
	U/l	336	285	387	25.50	51.00	P->L German methods 25°C
	U/l	360	306	414	27.00	54.00	L->P IFCC 37°C
	U/l	260	221	299	19.50	39.00	L->P IFCC 30°C
	U/l	183	155	211	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	70	56	84	7.00	14.00	Roche Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.78	1.56	2.00	0.11	0.22	Xylidyl Blue
	mg/dl	4.33	3.79	4.87	0.27	0.54	
	mmol/l	1.79	1.57	2.01	0.11	0.22	Chlorphosphonazo III
	mg/dl	4.35	3.82	4.88	0.27	0.53	
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	5.97	5.50	6.44	0.24	0.47	ISE method - indirect
Protein Total	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction end point
	g/dl	4.53	3.63	5.43	0.45	0.90	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.9	41.8	64.0	5.55	11.10	FE+UIBC(saturation with iron)
	µg/dl	296	234	358	31.00	62.00	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
	mmol/l	2.89	2.43	3.35	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	256	215	297	20.50	41.00	
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.91	8.64	11.2	0.64	1.27	
	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.90	8.60	11.2	0.65	1.30	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.84	8.57	11.1	0.64	1.27	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.3	25.7	34.9	2.30	4.60	Bromocresol Green
	g/dl	3.03	2.57	3.49	0.23	0.46	
Alkaline Phosphatase	U/l	246	209	283	18.50	37.00	Roche Integra AMP buffer 37°C
	U/l	192	163	221	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	157	134	180	11.50	23.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	121	97	145	12.00	24.00	Tris buffer without P5P 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	55	81	6.50	13.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	212	180	244	16.00	32.00	Roche EPS Liquid 37°C
Amylase Total	U/l	235	200	270	17.50	35.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	130	104	156	13.00	26.00	Tris buffer without P5P 37°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 30°C
	U/l	62	50	74	6.00	12.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.7	14.0	21.4	1.85	3.70	Enzymatic
Bile Acids	µmol/l	41.0	32.8	49.2	4.10	8.20	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.9	22.8	35.0	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Bilirubin Total	µmol/l	77.7	61.4	94.0	8.15	16.30	Diazo with Sulphanilic Acid
	mg/dl	4.55	3.59	5.51	0.48	0.96	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	76.4	60.3	92.5	8.05	16.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.47	3.53	5.41	0.47	0.94	
	µmol/l	76.7	60.6	92.8	8.05	16.10	Diazonium ion
	mg/dl	4.49	3.55	5.43	0.47	0.94	
Calcium	mmol/l	3.25	2.93	3.57	0.16	0.32	Cresolphthalein complexone
	mg/dl	13.0	11.7	14.3	0.65	1.30	
	mmol/l	3.23	2.91	3.55	0.16	0.32	NM-BAPTA
	mg/dl	12.9	11.7	14.1	0.60	1.20	
Chloride	mmol/l	110	102	118	4.00	8.00	ISE indirect
Cholesterol	mmol/l	7.01	6.10	7.92	0.46	0.91	Cholesterol Oxidase
	mg/dl	271	235	307	18.00	36.00	
CK Total	U/l	523	429	617	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	327	269	385	29.00	58.00	CK-NAC (IFCC) 30°C
	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	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	392	314	470	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	382	305	459	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.32	3.45	5.19	0.44	0.87	
gamma-GT	U/l	134	114	154	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	106	90	122	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	83	70	96	6.50	13.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	157	133	181	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	124	105	143	9.50	19.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	97	82	112	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.24	1.90	2.58	0.17	0.34	Direct HDL Roche 3rd generation
	mg/dl	86.5	73.3	99.7	6.60	13.20	
Iron	µmol/l	35.0	28.7	41.3	3.15	6.30	Colorimetric without ppt.
	µg/dl	196	160	232	18.00	36.00	
Lactate	mmol/l	5.19	4.26	6.12	0.47	0.93	Colorimetric Lactate Oxidase
	mg/dl	46.8	38.4	55.2	4.20	8.40	
LD (LDH)	U/l	362	307	417	27.50	55.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
	U/l	184	156	212	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	71	57	85	7.00	14.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.11	1.85	2.37	0.13	0.26	Spectrophotometric
	mg/dl	1.47	1.28	1.66	0.10	0.19	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.23	1.89	2.57	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.91	5.86	7.96	0.53	1.05	
Potassium	mmol/l	5.99	5.51	6.47	0.24	0.48	ISE method - indirect
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.4	41.4	63.4	5.50	11.00	FE+UIBC(saturation with iron)
	µg/dl	293	231	355	31.00	62.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	39.9	31.6	48.2	4.15	8.30	Calculated from Transferrin
	µg/dl	223	177	269	23.00	46.00	
Triglycerides	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	251	211	291	20.00	40.00	
	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	18.3	15.5	21.1	1.40	2.80	Urease kinetic
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	18.3	15.6	21.0	1.35	2.70	BUN
	mg/dl	51.4	43.7	59.1	3.85	7.70	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.59	8.35	10.8	0.62	1.24	
	mmol/l	0.58	0.50	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.74	8.47	11.0	0.64	1.27	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.63	8.37	10.9	0.63	1.26	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
Alkaline Phosphatase	U/l	508	432	584	38.00	76.00	Diethanolamine buffer DEA 37°C
	U/l	338	287	389	25.50	51.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	128	102	154	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	252	214	290	19.00	38.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	273	232	314	20.50	41.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.3	14.5	22.1	1.90	3.80	Enzymatic
Bile Acids	µmol/l	43.6	34.9	52.3	4.35	8.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	30.0	23.7	36.3	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	28.9	22.9	34.9	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.69	1.34	2.04	0.18	0.35	
Bilirubin Total	µmol/l	89.3	70.5	108	9.40	18.80	Diazo with Sulphanilic Acid
	mg/dl	5.22	4.12	6.32	0.55	1.10	
	µmol/l	90.2	71.3	109	9.45	18.90	Oxidation to Biliverdin/Vanadate
	mg/dl	5.28	4.17	6.39	0.56	1.11	
Calcium	mmol/l	3.27	2.95	3.59	0.16	0.32	Arsenazo III
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE direct

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.20	6.26	8.14	0.47	0.94	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	
CK Total	U/l	532	436	628	48.00	96.00	CK-NAC substrate start (DGKC) 37°C
	U/l	569	467	671	51.00	102.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	318	255	381	31.50	63.00	Alkaline picrate no deproteinization
	mg/dl	3.59	2.88	4.30	0.36	0.71	
	µmol/l	385	308	462	38.50	77.00	Enzymatic UV method
	mg/dl	4.35	3.48	5.22	0.44	0.87	
gamma-GT	U/l	160	136	184	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (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	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
Iron	µmol/l	36.4	29.8	43.0	3.30	6.60	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
Lactate	mmol/l	5.23	4.29	6.17	0.47	0.94	Colorimetric Lactate Oxidase
	mg/dl	47.1	38.7	55.5	4.20	8.40	
LD (LDH)	U/l	696	592	800	52.00	104.00	P->L German methods 37°C
	U/l	369	314	424	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	87	70	104	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.95	1.72	2.18	0.12	0.23	Colorimetric
	mg/dl	1.35	1.19	1.51	0.08	0.16	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.30	1.96	2.64	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.13	6.08	8.18	0.53	1.05	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.01	5.53	6.49	0.24	0.48	Enzymatic
	mmol/l	5.84	5.37	6.31	0.24	0.47	ISE method - direct
Protein Total	g/l	46.9	37.5	56.3	4.70	9.40	Biuret reaction end point
	g/dl	4.69	3.75	5.63	0.47	0.94	
Sodium	mmol/l	154	146	162	4.00	8.00	Enzymatic
	mmol/l	157	149	165	4.00	8.00	ISE method - direct
TIBC	µmol/l	54.3	42.9	65.7	5.70	11.40	Direct Colorimetric
	µg/dl	304	240	368	32.00	64.00	
Triglycerides	mmol/l	2.93	2.46	3.40	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	259	218	300	20.50	41.00	
Urea	mmol/l	18.2	15.5	20.9	1.35	2.70	Urease kinetic
	mg/dl	109	93.2	125	7.90	15.80	
	mmol/l	18.2	15.5	20.9	1.35	2.70	BUN
	mg/dl	51.1	43.4	58.8	3.85	7.70	
Uric Acid (Urate)	mmol/l	0.60	0.53	0.68	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.1	8.84	11.4	0.63	1.26	
	mmol/l	0.61	0.53	0.68	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	10.2	8.87	11.5	0.67	1.33	

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

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.7	24.4	33.0	2.15	4.30	Bromocresol Green
	g/dl	2.87	2.44	3.30	0.22	0.43	
	g/l	27.3	23.2	31.4	2.05	4.10	Bromocresol Purple
	g/dl	2.73	2.32	3.14	0.21	0.41	
Alkaline Phosphatase	U/l	281	239	323	21.00	42.00	AMP optimised to IFCC 37°C
	U/l	276	235	317	20.50	41.00	AMP non-optimised 37°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	217	184	250	16.50	33.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	248	211	285	18.50	37.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.9	14.2	21.6	1.85	3.70	Enzymatic
Bile Acids	µmol/l	47.1	37.7	56.5	4.70	9.40	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	27.7	21.9	33.5	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Bilirubin Total	µmol/l	88.8	70.2	107	9.30	18.60	Oxidation to Biliverdin/Vanadate
	mg/dl	5.19	4.11	6.27	0.54	1.08	
Calcium	mmol/l	3.28	2.95	3.61	0.17	0.33	Cresolphthalein complexone
	mg/dl	13.1	11.8	14.4	0.65	1.30	
	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.30	6.35	8.25	0.48	0.95	Cholesterol Oxidase
	mg/dl	282	245	319	18.50	37.00	
CK Total	U/l	547	448	646	49.50	99.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	383	307	459	38.00	76.00	Enzymatic UV method
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	µmol/l	363	291	435	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.10	3.29	4.91	0.41	0.81	
gamma-GT	U/l	155	132	178	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	14.8	12.6	17.0	1.10	2.20	Hexokinase
	mg/dl	267	227	307	20.00	40.00	
	mmol/l	15.0	12.8	17.2	1.10	2.20	Glucose oxidase
	mg/dl	270	231	309	19.50	39.00	
HDL - Cholesterol	mmol/l	2.08	1.77	2.39	0.16	0.31	Direct Clearance Method
	mg/dl	80.3	68.3	92.3	6.00	12.00	
Iron	µmol/l	36.5	29.9	43.1	3.30	6.60	Colorimetric without ppt.
	µg/dl	204	167	241	18.50	37.00	
Lactate	mmol/l	5.26	4.32	6.20	0.47	0.94	Colorimetric Lactate Oxidase
	mg/dl	47.4	38.9	55.9	4.25	8.50	
LD (LDH)	U/l	352	299	405	26.50	53.00	L->P 37°C
	U/l	689	585	793	52.00	104.00	P->L German methods 37°C
	U/l	369	314	424	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	84	68	100	8.00	16.00	Other Colorimetric 37°C
Lithium	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	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	

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Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			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	5.94	5.46	6.42	0.24	0.48	ISE method - indirect
Protein Total	g/l	46.6	37.3	55.9	4.65	9.30	Biuret reaction end point
	g/dl	4.66	3.73	5.59	0.47	0.93	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	52.5	41.5	63.5	5.50	11.00	Direct Colorimetric
	µg/dl	293	232	354	30.50	61.00	
Triglycerides	mmol/l	2.94	2.47	3.41	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	260	219	301	20.50	41.00	
	mmol/l	2.96	2.48	3.44	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	262	219	305	21.50	43.00	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.59	0.52	0.67	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.95	8.65	11.3	0.65	1.30	

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RANDOX

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.8	23.7	31.9	2.05	4.10	Bromocresol Purple
	g/dl	2.78	2.37	3.19	0.21	0.41	
Alkaline Phosphatase	U/l	286	243	329	21.50	43.00	Siemens Dimension AMP buffer 37°C
	U/l	287	244	330	21.50	43.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	137	110	164	13.50	27.00	Tris buffer with P5P 37°C
	U/l	139	111	167	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	297	252	342	22.50	45.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	173	138	208	17.50	35.00	Tris buffer with P5P 37°C
	U/l	179	143	215	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	16.4	13.0	19.8	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.959	0.761	1.16	0.10	0.20	
Bilirubin Total	µmol/l	82.5	65.1	99.9	8.70	17.40	Diazo with Sulphanilic Acid
	mg/dl	4.83	3.81	5.85	0.51	1.02	
Calcium	mmol/l	3.24	2.91	3.57	0.17	0.33	Cresolphthalein complexone
	mg/dl	13.0	11.7	14.3	0.65	1.30	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.68	5.82	7.54	0.43	0.86	Cholesterol Oxidase
	mg/dl	258	225	291	16.50	33.00	
	mmol/l	6.54	5.69	7.39	0.43	0.85	Dimension-Siemens reagents
	mg/dl	252	220	284	16.00	32.00	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	523	429	617	47.00	94.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	381	305	457	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	377	302	452	37.50	75.00	Enzymatic UV method
	mg/dl	4.26	3.41	5.11	0.43	0.85	
	µmol/l	387	309	465	39.00	78.00	IDMS traceable
	mg/dl	4.37	3.49	5.25	0.44	0.88	
gamma-GT	U/l	160	136	184	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	188	160	216	14.00	28.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.50	41.00	
HDL - Cholesterol	mmol/l	2.47	2.10	2.84	0.19	0.37	Direct HDL PEGME
	mg/dl	95.3	81.1	110	7.10	14.20	
Iron	µmol/l	34.5	28.3	40.7	3.10	6.20	Colorimetric with ppt.
	µg/dl	193	158	228	17.50	35.00	
	µmol/l	34.3	28.1	40.5	3.10	6.20	Colorimetric without ppt.
	µg/dl	192	157	227	17.50	35.00	
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	
	mmol/l	5.32	4.36	6.28	0.48	0.96	UV LDH
	mg/dl	47.9	39.3	56.5	4.30	8.60	
LD (LDH)	U/l	346	294	398	26.00	52.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	341	290	392	25.50	51.00	L->P IFCC 37°C
Lipase	U/l	336	270	402	33.00	66.00	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	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.28	1.93	2.63	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.07	5.98	8.16	0.55	1.09	
Potassium	mmol/l	5.89	5.42	6.36	0.24	0.47	ISE method - indirect
Protein Total	g/l	47.0	37.6	56.4	4.70	9.40	Biuret reaction end point
	g/dl	4.70	3.76	5.64	0.47	0.94	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	45.6	36.0	55.2	4.80	9.60	Removal of excess free iron
	µg/dl	255	201	309	27.00	54.00	
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	2.85	2.40	3.30	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	252	212	292	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	18.9	16.0	21.8	1.45	2.90	Urease kinetic
	mg/dl	114	96.2	132	8.90	17.80	
	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.59	0.52	0.67	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.93	8.65	11.2	0.64	1.28	
	mmol/l	0.59	0.51	0.67	0.04	0.08	Spectrophotometric at 280-290
	mg/dl	9.93	8.64	11.2	0.65	1.29	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Green
	g/dl	2.93	2.49	3.37	0.22	0.44	
	g/l	27.9	23.7	32.1	2.10	4.20	Bromocresol Purple
	g/dl	2.79	2.37	3.21	0.21	0.42	
Alkaline Phosphatase	U/l	280	238	322	21.00	42.00	Siemens Dimension AMP buffer 37°C
	U/l	287	244	330	21.50	43.00	AMP optimised to IFCC 37°C
	U/l	249	212	286	18.50	37.00	Randox AMP 37°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Tris buffer with P5P 37°C
	U/l	137	109	165	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	296	252	340	22.00	44.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	180	144	216	18.00	36.00	Tris buffer with P5P 37°C
	U/l	179	143	215	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.6	14.7	22.5	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	16.0	12.7	19.3	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.936	0.743	1.13	0.10	0.19	
Bilirubin Total	µmol/l	82.5	65.2	99.8	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.83	3.81	5.85	0.51	1.02	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.85	5.96	7.74	0.45	0.89	Cholesterol Oxidase
	mg/dl	264	230	298	17.00	34.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	6.60	5.74	7.46	0.43	0.86	Dimension-Siemens reagents
	mg/dl	255	222	288	16.50	33.00	
CK Total	U/l	522	428	616	47.00	94.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	380	304	456	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	374	299	449	37.50	75.00	Enzymatic UV method
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	376	301	451	37.50	75.00	Jaffe rate blanked
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	388	310	466	39.00	78.00	IDMS traceable
	mg/dl	4.38	3.50	5.26	0.44	0.88	
gamma-GT	U/l	171	145	197	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	188	160	216	14.00	28.00	Siemens Dimension (non 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	
HDL - Cholesterol	mmol/l	2.50	2.12	2.88	0.19	0.38	Direct HDL PPD
	mg/dl	96.5	81.8	111	7.35	14.70	
	mmol/l	2.56	2.18	2.94	0.19	0.38	Direct HDL PEGME
	mg/dl	98.8	84.1	114	7.35	14.70	
	mmol/l	2.60	2.21	2.99	0.20	0.39	Direct Clearance Method
	mg/dl	100	85.3	115	7.35	14.70	
Iron	µmol/l	34.3	28.1	40.5	3.10	6.20	Colorimetric without ppt.
	µg/dl	192	157	227	17.50	35.00	
LD (LDH)	U/l	357	304	410	26.50	53.00	Siemens Dimension L-P Non IFCC 37°C

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	340	289	391	25.50	51.00	L->P IFCC 37°C
Lipase	U/l	336	269	403	33.50	67.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Methylthymol blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.32	1.98	2.66	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.19	6.14	8.24	0.53	1.05	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	5.91	5.44	6.38	0.24	0.47	ISE method - indirect
Protein Total	g/l	47.3	37.8	56.8	4.75	9.50	Biuret reaction end point
	g/dl	4.73	3.78	5.68	0.48	0.95	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	45.9	36.3	55.5	4.80	9.60	Removal of excess free iron
	µg/dl	257	203	311	27.00	54.00	
	µmol/l	50.5	39.9	61.1	5.30	10.60	FE+UIBC(saturation with iron)
	µg/dl	282	223	341	29.50	59.00	
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	2.83	2.38	3.28	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	250	211	289	19.50	39.00	
	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	253	212	294	20.50	41.00	
Urea	mmol/l	18.9	16.0	21.8	1.45	2.90	Urease end point
	mg/dl	114	96.2	132	8.90	17.80	
	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.86	8.58	11.1	0.64	1.28	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Spectrophotometric at 280-290
	mg/dl	9.83	8.55	11.1	0.64	1.28	

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SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	27.1	23.1	31.1	2.00	4.00	Bromocresol Purple
	g/dl	2.71	2.31	3.11	0.20	0.40	
Alkaline Phosphatase	U/l	282	240	324	21.00	42.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	132	106	158	13.00	26.00	Tris buffer with P5P 37°C
AST (GOT)	U/l	169	135	203	17.00	34.00	Tris buffer with P5P 37°C
Bicarbonate	mmol/l	18.6	14.7	22.5	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	82.0	64.8	99.2	8.60	17.20	Diazo with Sulphanilic Acid
	mg/dl	4.80	3.79	5.81	0.51	1.01	
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	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect
CK Total	U/l	526	431	621	47.50	95.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	389	311	467	39.00	78.00	Jaffe rate blanked
	mg/dl	4.40	3.51	5.29	0.45	0.89	
Glucose	mmol/l	14.7	12.5	16.9	1.10	2.20	Hexokinase
	mg/dl	265	225	305	20.00	40.00	
HDL - Cholesterol	mmol/l	2.42	2.05	2.79	0.19	0.37	Direct HDL PEGME
	mg/dl	93.4	79.1	108	7.15	14.30	
Iron	µmol/l	34.8	28.5	41.1	3.15	6.30	Colorimetric without ppt.
	µg/dl	195	159	231	18.00	36.00	

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SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	347	295	399	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	409	328	490	40.50	81.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.82	1.61	2.03	0.11	0.21	Methylthymol blue
	mg/dl	4.42	3.91	4.93	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	5.81	5.35	6.27	0.23	0.46	ISE method - indirect
Protein Total	g/l	47.3	37.9	56.7	4.70	9.40	Biuret reaction end point
	g/dl	4.73	3.79	5.67	0.47	0.94	
Sodium	mmol/l	156	149	163	3.50	7.00	ISE method - indirect
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.67	0.04	0.08	Spectrophotometric at 280-290
	mg/dl	9.93	8.64	11.2	0.65	1.29	

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RANDOX

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.4	25.8	35.0	2.30	4.60	Bromocresol Green
	g/dl	3.04	2.58	3.50	0.23	0.46	
Alkaline Phosphatase	U/l	484	412	556	36.00	72.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	133	107	159	13.00	26.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	131	105	157	13.00	26.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	86.8	68.5	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.08	4.01	6.15	0.54	1.07	
Calcium	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	
Cholesterol	mmol/l	7.24	6.30	8.18	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	
Creatinine	µmol/l	355	284	426	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.01	3.21	4.81	0.40	0.80	
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
Iron	µmol/l	35.8	29.4	42.2	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
LD (LDH)	U/l	346	294	398	26.00	52.00	L->P IFCC 37°C
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	
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	

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RANDOX

VITALAB FLEXOR®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1038UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-07-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	

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