RANDOX 2797 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. 1224UE **EXPIRY:** 2025-04-28

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

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

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

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

Health and Safety Data Sheets are available on request.

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

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

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

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

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

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

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

MATERIALS PROVIDED

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

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

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

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

With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean ±2S.D.

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

NOTES

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

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

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

Rev. 28 Oct '21 me

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.0	24.6	33.4	2.20	4.40	Bromocresol Green
	g/dl	2.90	2.46	3.34	0.22	0.44	
	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	
Alkaline Phosphatase	U/l	325	276	374	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	323	275	371	24.00	48.00	AMP non-optimised 37°C
	U/l	316	268	364	24.00	48.00	Colorimetric 37°C
ALT (GPT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	253	215	291	19.00	38.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	327	278	376	24.50	49.00	Abbott Architect IFCC Cal. 37°C
	U/l	313	266	360	23.50	47.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic
Bile Acids	µmol/l	44.7	35.8	53.6	4.45	8.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	38.8	30.6	47.0	4.10	8.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.27	1.79	2.75	0.24	0.48	
	µmol/l	38.8	30.7	46.9	4.05	8.10	Diazo with Sulphanilic Acid
	mg/dl	2.27	1.80	2.74	0.24	0.47	
	µmol/l	39.0	30.8	47.2	4.10	8.20	Diazo with Dichloroaniline (DCA)
	mg/dl	2.28	1.80	2.76	0.24	0.48	
Bilirubin Total	µmol/l	100	79.0	121	10.50	21.00	Diazo with Dichloroaniline (DCA)
	mg/dl	5.85	4.62	7.08	0.62	1.23	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	98.9	78.1	120	10.40	20.80	Diazo with Sulphanilic Acid
	mg/dl	5.79	4.57	7.01	0.61	1.22	
	µmol/l	96.6	76.3	117	10.15	20.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.65	4.46	6.84	0.60	1.19	
	µmol/l	105	83.0	127	11.00	22.00	Nitrobenzenediazonium salt
	mg/dl	6.14	4.86	7.42	0.64	1.28	
	µmol/l	98.7	78.0	119	10.35	20.70	Diazonium ion
	mg/dl	5.77	4.56	6.98	0.61	1.21	
Calcium	mmol/l	3.01	2.71	3.31	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.04	2.74	3.34	0.15	0.30	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.25	6.31	8.19	0.47	0.94	Cholesterol Oxidase - Abell Kendall
	mg/dl	280	244	316	18.00	36.00	
	mmol/l	7.32	6.37	8.27	0.48	0.95	Cholesterol Oxidase - IDMS
	mg/dl	283	246	320	18.50	37.00	
	mmol/l	7.23	6.29	8.17	0.47	0.94	Cholesterol Dehydrogenase
	mg/dl	279	243	315	18.00	36.00	
Cholinesterase	U/l	6078	4862	7294	608.00	1216.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	534	438	630	48.00	96.00	CK-NAC serum start (DGKC) 37°C
	U/l	561	460	662	50.50	101.00	CK-NAC substrate start (DGKC) 37°C
	U/l	561	460	662	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	556	456	656	50.00	100.00	Abbott CK-NAC (IFCC) 37°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Copper	µmol/l	20.3	16.2	24.4	2.05	4.10	Colorimetric
	µg/dl	129	103	155	13.00	26.00	
Creatinine	µmol/l	459	367	551	46.00	92.00	Alkaline picrate with deproteinization
	mg/dl	5.19	4.15	6.23	0.52	1.04	
	µmol/l	463	371	555	46.00	92.00	Alkaline picrate no deproteinization
	mg/dl	5.23	4.19	6.27	0.52	1.04	
	µmol/l	458	367	549	45.50	91.00	Enzymatic UV method
	mg/dl	5.18	4.15	6.21	0.52	1.03	
	µmol/l	465	372	558	46.50	93.00	Jaffe rate blanked
	mg/dl	5.25	4.20	6.30	0.53	1.05	
	µmol/l	465	372	558	46.50	93.00	IDMS traceable
	mg/dl	5.25	4.20	6.30	0.53	1.05	
Free T4	pmol/l	59.6	44.7	74.5	7.45	14.90	Abbott Architect
	ng/dl	4.65	3.49	5.81	0.58	1.16	
	pg/ml	46.5	34.9	58.1	5.80	11.60	Abbott Architect
gamma-GT	U/l	182	155	209	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	177	150	204	13.50	27.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	183	156	210	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	185	157	213	14.00	28.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose oxidase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.41	2.05	2.77	0.18	0.36	Direct HDL PPD
	mg/dl	93.0	79.1	107	6.95	13.90	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.36	2.00	2.72	0.18	0.36	Direct HDL Immunoseparation
	mg/dl	91.1	77.2	105	6.95	13.90	
	mmol/l	2.45	2.08	2.82	0.19	0.37	Direct Clearance Method
	mg/dl	94.6	80.3	109	7.15	14.30	
	mmol/l	2.39	2.03	2.75	0.18	0.36	HDL - Ultra
	mg/dl	92.3	78.4	106	6.95	13.90	
Iron	µmol/l	36.5	29.9	43.1	3.30	6.60	Colorimetric with ppt.
	µg/dl	204	167	241	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	375	319	431	28.00	56.00	L->P 37°C
	U/l	376	320	432	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	62	49	75	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	2.01	1.77	2.25	0.12	0.24	Spectrophotometric
	mg/dl	1.40	1.23	1.57	0.09	0.17	
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Arsenazo III
	mg/dl	4.11	3.62	4.60	0.25	0.49	
	mmol/l	1.73	1.53	1.93	0.10	0.20	Xylidyl Blue
	mg/dl	4.20	3.72	4.68	0.24	0.48	
	mmol/l	1.70	1.50	1.90	0.10	0.20	Enzymatic
	mg/dl	4.13	3.65	4.61	0.24	0.48	
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	

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Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Potassium	mmol/l	6.13	5.64	6.62	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.8	36.6	55.0	4.60	9.20	Biuret reaction end point
	g/dl	4.58	3.66	5.50	0.46	0.92	
	g/l	46.3	37.0	55.6	4.65	9.30	Biuret reaction kinetic
	g/dl	4.63	3.70	5.56	0.47	0.93	
PSA Total	ng/ml =	17.9	13.4	22.4	2.25	4.50	Abbott Architect
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.93	0.74	1.11	0.09	0.19	Abbott Architect
TIBC	µmol/l	40.8	32.2	49.4	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	228	180	276	24.00	48.00	
Triglycerides	mmol/l	2.97	2.50	3.44	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	263	221	305	21.00	42.00	
	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	265	222	308	21.50	43.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	20.8	17.7	23.9	1.55	3.10	Urease end point
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	20.7	17.6	23.8	1.55	3.10	Urease kinetic
	mg/dl	124	106	142	9.00	18.00	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	20.7	17.6	23.8	1.55	3.10	BUN
	mg/dl	58.1	49.4	66.8	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.39	8.16	10.6	0.62	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.11	10.6	0.62	1.23	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.37	8.16	10.6	0.61	1.21	

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			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	
Alkaline Phosphatase	U/l	344	292	396	26.00	52.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	37.7	29.8	45.6	3.95	7.90	Diazo with Sulphanilic Acid
	mg/dl	2.21	1.74	2.68	0.24	0.47	
	µmol/l	37.9	30.0	45.8	3.95	7.90	Diazo with Dichloroaniline (DCA)
	mg/dl	2.22	1.76	2.68	0.23	0.46	
Bilirubin Total	µmol/l	108	84.9	131	11.55	23.10	Diazo with Dichloroaniline (DCA)
	mg/dl	6.32	4.97	7.67	0.68	1.35	
Calcium	mmol/l	3.15	2.84	3.46	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE direct
Cholesterol	mmol/l	7.36	6.40	8.32	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	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
Creatinine	µmol/l	405	324	486	40.50	81.00	Alkaline picrate no deproteinization
	mg/dl	4.58	3.66	5.50	0.46	0.92	
	µmol/l	425	340	510	42.50	85.00	Jaffe rate blanked
	mg/dl	4.80	3.84	5.76	0.48	0.96	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	179	153	205	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	185	157	213	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.35	1.99	2.71	0.18	0.36	Direct HDL PPD
	mg/dl	90.7	76.8	105	6.95	13.90	
	mmol/l	2.38	2.02	2.74	0.18	0.36	Direct Clearance Method
	mg/dl	91.9	78.0	106	6.95	13.90	
Iron	µmol/l	35.5	29.1	41.9	3.20	6.40	Colorimetric without ppt.
	µg/dl	198	163	233	17.50	35.00	
LD (LDH)	U/l	774	658	890	58.00	116.00	P->L German methods 37°C
	U/l	389	330	448	29.50	59.00	L->P IFCC 37°C
Lipase	U/l	57	45	69	6.00	12.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.59	1.40	1.78	0.10	0.19	Xylidyl Blue
	mg/dl	3.86	3.40	4.32	0.23	0.46	
Phosphate Inorganic	mmol/l	2.52	2.14	2.90	0.19	0.38	Phosphomolybdate UV
	mg/dl	7.81	6.63	8.99	0.59	1.18	
Potassium	mmol/l	5.95	5.48	6.42	0.24	0.47	ISE method - direct
Protein Total	g/l	47.4	37.9	56.9	4.75	9.50	Biuret reaction end point
	g/dl	4.74	3.79	5.69	0.48	0.95	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	

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RANDOX

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.17	7.98	10.4	0.60	1.19	
	mmol/l	0.53	0.46	0.59	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	8.82	7.68	9.96	0.57	1.14	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.1	23.9	32.3	2.10	4.20	Bromocresol Green
	g/dl	2.81	2.39	3.23	0.21	0.42	
	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	376	320	432	28.00	56.00	AMP optimised to IFCC 37°C
	U/l	357	304	410	26.50	53.00	AMP non-optimised 37°C
ALT (GPT)	U/l	158	126	190	16.00	32.00	Colorimetric 37°C
	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	145	116	174	14.50	29.00	Tris buffer SCE 37°C
	U/l	143	114	172	14.50	29.00	Beckman (Extinction Coefficient) 37°C
Amylase Pancreatic	U/l	246	209	283	18.50	37.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	295	251	339	22.00	44.00	pNP Maltotrioside substrates 37°C
	U/l	285	243	327	21.00	42.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	292	248	336	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	293	249	337	22.00	44.00	Beckman Synchron AMY7 37°C
	U/l	288	244	332	22.00	44.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	148	118	178	15.00	30.00	Colorimetric 37°C
	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
	U/l	148	118	178	15.00	30.00	Tris buffer SCE 37°C
	U/l	147	118	176	14.50	29.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	32.7	25.9	39.5	3.40	6.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.91	1.52	2.30	0.20	0.39	
	µmol/l	33.6	26.6	40.6	3.50	7.00	Diazo with Sulphanilic Acid
	mg/dl	1.97	1.56	2.38	0.21	0.41	
	µmol/l	31.5	24.9	38.1	3.30	6.60	Diazo/ Sulphanilic Beckman DxC
	mg/dl	1.84	1.46	2.22	0.19	0.38	
Bilirubin Total	µmol/l	101	80.0	122	10.50	21.00	Diazo with Dichloroaniline (DCA)
	mg/dl	5.91	4.68	7.14	0.62	1.23	
	µmol/l	99.1	78.3	120	10.40	20.80	Diazo with Sulphanilic Acid
	mg/dl	5.80	4.58	7.02	0.61	1.22	
	µmol/l	100	79.3	121	10.35	20.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.85	4.64	7.06	0.61	1.21	
	µmol/l	104	82.5	126	10.75	21.50	Oxidation to Biliverdin/Vanadate
	mg/dl	6.08	4.83	7.33	0.63	1.25	
	µmol/l	101	79.6	122	10.70	21.40	DPD (Beckman AU)
	mg/dl	5.91	4.66	7.16	0.63	1.25	
Calcium	mmol/l	3.14	2.82	3.46	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.09	2.79	3.39	0.15	0.30	Ion selective electrode
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.13	2.81	3.45	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.19	2.87	3.51	0.16	0.32	NM-BAPTA
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Chloride	mmol/l	114	105	123	4.50	9.00	Colorimetric

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.52	6.54	8.50	0.49	0.98	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	252	328	19.00	38.00	
	mmol/l	7.66	6.66	8.66	0.50	1.00	Cholesterol Oxidase - IDMS
	mg/dl	296	257	335	19.50	39.00	
	mmol/l	7.55	6.57	8.53	0.49	0.98	Cholesterol Dehydrogenase
	mg/dl	291	254	328	18.50	37.00	
Cholinesterase	U/l	4957	3965	5949	496.00	992.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	570	468	672	51.00	102.00	CK-NAC (IFCC) 37°C
	U/l	581	477	685	52.00	104.00	Monothioglycerol 37°C
	U/l	566	464	668	51.00	102.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	419	336	502	41.50	83.00	Alkaline picrate with deproteinization
	mg/dl	4.73	3.80	5.66	0.47	0.93	
	µmol/l	415	332	498	41.50	83.00	Alkaline picrate no deproteinization
	mg/dl	4.69	3.75	5.63	0.47	0.94	
	µmol/l	437	350	524	43.50	87.00	Enzymatic UV method
	mg/dl	4.94	3.96	5.92	0.49	0.98	
	µmol/l	442	354	530	44.00	88.00	Creatinine PAP method
	mg/dl	4.99	4.00	5.98	0.50	0.99	
	µmol/l	415	332	498	41.50	83.00	Jaffe rate blanked
	mg/dl	4.69	3.75	5.63	0.47	0.94	
	µmol/l	422	338	506	42.00	84.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.77	3.82	5.72	0.48	0.95	
	µmol/l	429	343	515	43.00	86.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.85	3.88	5.82	0.49	0.97	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	428	343	513	42.50	85.00	IDMS traceable
	mg/dl	4.84	3.88	5.80	0.48	0.96	
D-3-Hydroxybutyrate	mmol/l	1.16	0.98	1.34	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	183	156	210	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	189	160	218	14.50	29.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	188	160	216	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	180	153	207	13.50	27.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	187	159	215	14.00	28.00	Beckman Szasz (Extinction Coeff) 37°C
Glucose	mmol/l	15.8	13.5	18.1	1.15	2.30	GOD/02-Beckman method
	mg/dl	285	243	327	21.00	42.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose dehydrogenase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	
	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
HDL - Cholesterol	mmol/l	2.55	2.17	2.93	0.19	0.38	Direct HDL PPD
	mg/dl	98.4	83.8	113	7.30	14.60	
	mmol/l	2.47	2.10	2.84	0.19	0.37	Direct HDL Immunoseparation
	mg/dl	95.3	81.1	110	7.10	14.20	
	mmol/l	2.44	2.07	2.81	0.19	0.37	Direct Clearance Method
	mg/dl	94.2	79.9	109	7.15	14.30	
	mmol/l	2.43	2.07	2.79	0.18	0.36	HDL - Ultra
	mg/dl	93.8	79.9	108	6.95	13.90	
Iron	µmol/l	35.9	29.4	42.4	3.25	6.50	Colorimetric with ppt.
	µg/dl	201	164	238	18.50	37.00	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	165	239	18.50	37.00	
Lactate	mmol/l	5.33	4.37	6.29	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.0	39.4	56.6	4.30	8.60	
LD (LDH)	U/l	369	314	424	27.50	55.00	L->P 37°C
	U/l	839	713	965	63.00	126.00	P->L Scandinavian & Dutch 37°C
	U/l	790	671	909	59.50	119.00	P->L German methods 37°C
	U/l	385	327	443	29.00	58.00	L->P IFCC 37°C
	U/l	386	328	444	29.00	58.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	68	54	82	7.00	14.00	Other Colorimetric 37°C
	U/l	92	74	110	9.00	18.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.06	1.81	2.31	0.13	0.25	Ion selective electrode
	mg/dl	1.43	1.26	1.60	0.09	0.17	
	mmol/l	2.01	1.77	2.25	0.12	0.24	Spectrophotometric
	mg/dl	1.40	1.23	1.57	0.09	0.17	
Magnesium	mmol/l	1.80	1.59	2.01	0.11	0.21	Arsenazo III
	mg/dl	4.37	3.86	4.88	0.26	0.51	
	mmol/l	1.73	1.53	1.93	0.10	0.20	Calmagite
	mg/dl	4.20	3.72	4.68	0.24	0.48	
	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	
	mmol/l	1.67	1.47	1.87	0.10	0.20	Methylthymol blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Enzymatic
	mg/dl	4.23	3.72	4.74	0.26	0.51	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	355	284	426	35.50	71.00	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	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Beckman PHOSm (365nm)
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.5	35.6	53.4	4.45	8.90	Biuret reaction end point
	g/dl	4.45	3.56	5.34	0.45	0.89	
	g/l	44.7	35.8	53.6	4.45	8.90	Biuret reaction kinetic
	g/dl	4.47	3.58	5.36	0.45	0.89	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	40.7	32.1	49.3	4.30	8.60	Removal of excess free iron
	µg/dl	228	179	277	24.50	49.00	
	µmol/l	41.3	32.6	50.0	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	231	182	280	24.50	49.00	
	µmol/l	42.1	33.3	50.9	4.40	8.80	Direct Colorimetric
	µg/dl	235	186	284	24.50	49.00	
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	
	mmol/l	2.93	2.47	3.39	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	259	219	299	20.00	40.00	
	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	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.77	2.33	3.21	0.22	0.44	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	245	206	284	19.50	39.00	
	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	258	216	300	21.00	42.00	
Urea	mmol/l	20.3	17.3	23.3	1.50	3.00	Beckman-Conductivity
	mg/dl	122	104	140	9.00	18.00	
	mmol/l	20.5	17.4	23.6	1.55	3.10	Urease end point
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	20.6	17.5	23.7	1.55	3.10	Urease kinetic
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease hypochlorite
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	20.6	17.5	23.7	1.55	3.10	BUN
	mg/dl	57.8	49.1	66.5	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.57	0.50	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	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.56	8.32	10.8	0.62	1.24	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Spectrophotometric at 280-290
	mg/dl	9.69	8.43	11.0	0.63	1.26	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.46	8.23	10.7	0.62	1.23	
Zinc	µmol/l	34.4	27.5	41.3	3.45	6.90	Colorimetric with deproteinisation
	µg/dl	225	180	270	22.50	45.00	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Purple
	g/dl	2.93	2.49	3.37	0.22	0.44	
Alkaline Phosphatase	U/l	350	297	403	26.50	53.00	AMP optimised to IFCC 37°C
	U/l	334	284	384	25.00	50.00	AMP non-optimised 37°C
ALT (GPT)	U/l	137	110	164	13.50	27.00	Beckman Mod. IFCC Ref. without P5P 37°C
Amylase Total	U/l	308	262	354	23.00	46.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	298	253	343	22.50	45.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	133	106	160	13.50	27.00	Beckman Mod. IFCC Ref. without P5P 37°C
Bilirubin Total	µmol/l	99.2	78.4	120	10.40	20.80	Diazo with Sulphanilic Acid
	mg/dl	5.80	4.59	7.01	0.61	1.21	
Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Ion selective electrode
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.61	6.62	8.60	0.50	0.99	Cholesterol Oxidase - Abell Kendall
	mg/dl	294	256	332	19.00	38.00	
Cholinesterase	U/l	5107	4085	6129	511.00	1022.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	558	458	658	50.00	100.00	Monothioglycerol 37°C
Creatinine	µmol/l	451	361	541	45.00	90.00	Alkaline picrate no deproteinization
	mg/dl	5.10	4.08	6.12	0.51	1.02	
	µmol/l	436	349	523	43.50	87.00	Jaffe rate blanked
	mg/dl	4.93	3.94	5.92	0.50	0.99	

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RANDOX

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	458	366	550	46.00	92.00	IDMS traceable
	mg/dl	5.18	4.14	6.22	0.52	1.04	
Glucose	mmol/l	15.1	12.9	17.3	1.10	2.20	GOD/02-Beckman method
	mg/dl	272	232	312	20.00	40.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.44	2.08	2.80	0.18	0.36	Direct HDL PPD
	mg/dl	94.2	80.3	108	6.95	13.90	
	mmol/l	2.42	2.06	2.78	0.18	0.36	HDL - Ultra
	mg/dl	93.4	79.5	107	6.95	13.90	
Iron	µmol/l	35.8	29.3	42.3	3.25	6.50	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	
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	298	254	342	22.00	44.00	L->P 37°C
	U/l	975	829	1121	73.00	146.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
Lipase	U/l	64	51	77	6.50	13.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Calmagite
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.01	5.95	8.07	0.53	1.06	
Potassium	mmol/l	6.14	5.64	6.64	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction end point
	g/dl	4.50	3.60	5.40	0.45	0.90	
	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	263	220	306	21.50	43.00	
	mmol/l	2.96	2.49	3.43	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	262	220	304	21.00	42.00	
Urea	mmol/l	20.5	17.4	23.6	1.55	3.10	Beckman-Conductivity
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	20.8	17.7	23.9	1.55	3.10	Urease kinetic
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	20.8	17.7	23.9	1.55	3.10	BUN
	mg/dl	58.4	49.6	67.2	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.11	7.93	10.3	0.59	1.18	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			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	
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	110	88	132	11.00	22.00	Tris buffer without P5P 30°C
	U/l	84	67	101	8.50	17.00	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
Bilirubin Direct	µmol/l	38.0	30.0	46.0	4.00	8.00	Diazo with Sulphanilic Acid
	mg/dl	2.22	1.76	2.68	0.23	0.46	
Bilirubin Total	µmol/l	99.5	78.6	120	10.45	20.90	Diazo with Sulphanilic Acid
	mg/dl	5.82	4.60	7.04	0.61	1.22	
	µmol/l	104	81.8	126	11.10	22.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	6.08	4.79	7.37	0.65	1.29	
Calcium	mmol/l	3.04	2.73	3.35	0.16	0.31	Arsenazo III
	mg/dl	12.2	10.9	13.5	0.65	1.30	
Cholesterol	mmol/l	7.38	6.42	8.34	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	248	322	18.50	37.00	
	mmol/l	7.85	6.83	8.87	0.51	1.02	Cholesterol Oxidase - IDMS
	mg/dl	303	264	342	19.50	39.00	
Creatinine	µmol/l	410	328	492	41.00	82.00	Alkaline picrate no deproteinization
	mg/dl	4.63	3.71	5.55	0.46	0.92	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	177	151	203	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	119	159	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
Phosphate Inorganic	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	
Protein Total	g/l	48.0	38.4	57.6	4.80	9.60	Biuret reaction end point
	g/dl	4.80	3.84	5.76	0.48	0.96	
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	
	mmol/l	2.93	2.46	3.40	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	259	218	300	20.50	41.00	
Urea	mmol/l	18.8	16.0	21.6	1.40	2.80	Urease end point
	mg/dl	113	96.2	130	8.40	16.80	
	mmol/l	19.1	16.3	21.9	1.40	2.80	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	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	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.24	8.05	10.4	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.11	7.91	10.3	0.60	1.20	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.9	26.3	35.5	2.30	4.60	Bromocresol Green
	g/dl	3.09	2.63	3.55	0.23	0.46	
Alkaline Phosphatase	U/l	504	428	580	38.00	76.00	Diethanolamine buffer DEA 37°C
	U/l	393	333	453	30.00	60.00	Diethanolamine buffer DEA 30°C
	U/l	322	273	371	24.50	49.00	Diethanolamine buffer DEA 25°C
	U/l	348	296	400	26.00	52.00	AMP optimised to IFCC 37°C
	U/l	271	231	311	20.00	40.00	AMP optimised to IFCC 30°C
	U/l	222	189	255	16.50	33.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	158	126	190	16.00	32.00	Tris buffer without P5P 37°C
	U/l	117	93	141	12.00	24.00	Tris buffer without P5P 30°C
	U/l	89	71	107	9.00	18.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	157	126	188	15.50	31.00	Tris buffer without P5P 37°C
	U/l	106	85	127	10.50	21.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	38.0	30.0	46.0	4.00	8.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.22	1.76	2.68	0.23	0.46	
Bilirubin Total	µmol/l	91.7	72.4	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.36	4.24	6.48	0.56	1.12	
	µmol/l	91.5	72.3	111	9.60	19.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.35	4.23	6.47	0.56	1.12	
Calcium	mmol/l	3.07	2.77	3.37	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.36	6.40	8.32	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	247	321	18.50	37.00	
	mmol/l	7.03	6.11	7.95	0.46	0.92	Cholesterol Oxidase - IDMS
	mg/dl	271	236	306	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
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	427	342	512	42.50	85.00	Jaffe rate blanked
	mg/dl	4.83	3.86	5.80	0.49	0.97	
gamma-GT	U/l	185	157	213	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	146	124	168	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	114	97	131	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.36	2.00	2.72	0.18	0.36	Direct Clearance Method
	mg/dl	91.1	77.2	105	6.95	13.90	
LD (LDH)	U/l	798	678	918	60.00	120.00	P->L SFBC 37°C
	U/l	576	490	662	43.00	86.00	P->L SFBC 30°C
	U/l	405	344	466	30.50	61.00	P->L SFBC 25°C
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Xylidyl Blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
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	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	46.8	37.5	56.1	4.65	9.30	Biuret reaction end point
	g/dl	4.68	3.75	5.61	0.47	0.93	
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	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
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	18.8	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	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.58	8.33	10.8	0.63	1.25	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.48	8.25	10.7	0.62	1.23	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.48	8.23	10.7	0.63	1.25	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.7	25.3	34.1	2.20	4.40	Bromocresol Green
	g/dl	2.97	2.53	3.41	0.22	0.44	
Alkaline Phosphatase	U/l	491	417	565	37.00	74.00	Diethanolamine buffer DEA 37°C
	U/l	382	325	439	28.50	57.00	Diethanolamine buffer DEA 30°C
	U/l	314	266	362	24.00	48.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer without P5P 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	37.9	30.0	45.8	3.95	7.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.22	1.76	2.68	0.23	0.46	
	µmol/l	34.8	27.5	42.1	3.65	7.30	Diazo with Dichloroaniline (DCA)
	mg/dl	2.04	1.61	2.47	0.22	0.43	
Bilirubin Total	µmol/l	97.3	76.9	118	10.20	20.40	Diazo with Dichloroaniline (DCA)
	mg/dl	5.69	4.50	6.88	0.60	1.19	
	µmol/l	92.0	72.7	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.38	4.25	6.51	0.57	1.13	
	µmol/l	91.0	71.9	110	9.55	19.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.32	4.21	6.43	0.56	1.11	

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Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.03	2.73	3.33	0.15	0.30	Arsenazo III
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	Colorimetric
	mmol/l	112	103	121	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.51	6.54	8.48	0.49	0.97	Cholesterol Oxidase - Abell Kendall
	mg/dl	290	252	328	19.00	38.00	
	mmol/l	7.31	6.36	8.26	0.48	0.95	Cholesterol Oxidase - IDMS
	mg/dl	282	245	319	18.50	37.00	
Cholinesterase	U/l	4915	3932	5898	491.50	983.00	Colorimetric Butyrylthiocholine 37°C
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	414	332	496	41.00	82.00	Alkaline picrate no deproteinization
	mg/dl	4.68	3.75	5.61	0.47	0.93	
	µmol/l	440	352	528	44.00	88.00	Creatinine PAP method
	mg/dl	4.97	3.98	5.96	0.50	0.99	
	µmol/l	411	329	493	41.00	82.00	Jaffe rate blanked
	mg/dl	4.64	3.72	5.56	0.46	0.92	
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	137	117	157	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	107	91	123	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			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	2.42	2.06	2.78	0.18	0.36	Direct Clearance Method
	mg/dl	93.4	79.5	107	6.95	13.90	
Iron	µmol/l	35.8	29.4	42.2	3.20	6.40	Colorimetric with ppt.
	µg/dl	200	164	236	18.00	36.00	
	µmol/l	33.9	27.8	40.0	3.05	6.10	Colorimetric without ppt.
	µg/dl	190	155	225	17.50	35.00	
LD (LDH)	U/l	717	609	825	54.00	108.00	P->L Scandinavian & Dutch 37°C
	U/l	518	440	596	39.00	78.00	P->L Scandinavian & Dutch 30°C
	U/l	364	309	419	27.50	55.00	P->L Scandinavian & Dutch 25°C
	U/l	697	592	802	52.50	105.00	P->L German methods 37°C
	U/l	503	427	579	38.00	76.00	P->L German methods 30°C
	U/l	353	300	406	26.50	53.00	P->L German methods 25°C
Phosphate Inorganic	mmol/l	2.35	2.00	2.70	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.29	6.20	8.38	0.55	1.09	
Potassium	mmol/l	6.04	5.56	6.52	0.24	0.48	ISE method - direct
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	
Sodium	mmol/l	154	146	162	4.00	8.00	ISE method - direct
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	
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	

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RANDOX

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.06	7.88	10.2	0.59	1.18	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.0	26.3	35.7	2.35	4.70	Bromocresol Green
	g/dl	3.10	2.63	3.57	0.24	0.47	
	g/l	29.8	25.3	34.3	2.25	4.50	Turbidimetric Assays
	g/dl	2.98	2.53	3.43	0.23	0.45	
Alkaline Phosphatase	U/l	307	261	353	23.00	46.00	Roche Integra AMP buffer 37°C
	U/l	239	203	275	18.00	36.00	Roche Integra AMP buffer 30°C
	U/l	196	167	225	14.50	29.00	Roche Integra AMP buffer 25°C
	U/l	311	265	357	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	242	206	278	18.00	36.00	AMP optimised to IFCC 30°C
	U/l	199	169	229	15.00	30.00	AMP optimised to IFCC 25°C
	U/l	311	264	358	23.50	47.00	Colorimetric 37°C
	U/l	242	206	278	18.00	36.00	Colorimetric 30°C
	U/l	199	169	229	15.00	30.00	Colorimetric 25°C
ALT (GPT)	U/l	137	110	164	13.50	27.00	Colorimetric 37°C
	U/l	101	81	121	10.00	20.00	Colorimetric 30°C
	U/l	77	62	92	7.50	15.00	Colorimetric 25°C
	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	75	60	90	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	262	223	301	19.50	39.00	Roche EPS Liquid 37°C
Amylase Total	U/l	281	239	323	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	280	238	322	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	137	110	164	13.50	27.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	41.7	32.9	50.5	4.40	8.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.44	1.92	2.96	0.26	0.52	
	µmol/l	41.7	33.0	50.4	4.35	8.70	Diazo with Sulphanilic Acid
	mg/dl	2.44	1.93	2.95	0.26	0.51	
	µmol/l	41.8	33.0	50.6	4.40	8.80	Roche DPD JG standardised
	mg/dl	2.45	1.93	2.97	0.26	0.52	
	µmol/l	41.0	32.4	49.6	4.30	8.60	Diazo with Dichloroaniline (DCA)
	mg/dl	2.40	1.90	2.90	0.25	0.50	
	µmol/l	40.6	32.1	49.1	4.25	8.50	Roche DPD Doumas standardised
	mg/dl	2.38	1.88	2.88	0.25	0.50	
Bilirubin Total	µmol/l	92.5	73.1	112	9.70	19.40	Diazo with Dichloroaniline (DCA)
	mg/dl	5.41	4.28	6.54	0.57	1.13	
	µmol/l	91.7	72.4	111	9.65	19.30	Diazo with Sulphanilic Acid
	mg/dl	5.36	4.24	6.48	0.56	1.12	
	µmol/l	91.3	72.1	111	9.60	19.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.34	4.22	6.46	0.56	1.12	
	µmol/l	92.3	72.9	112	9.70	19.40	Diazonium ion
	mg/dl	5.40	4.26	6.54	0.57	1.14	
Calcium	mmol/l	3.15	2.84	3.46	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.4	13.8	0.60	1.20	
	mmol/l	3.07	2.76	3.38	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.35	6.40	8.30	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	247	321	18.50	37.00	
	mmol/l	7.37	6.41	8.33	0.48	0.96	Cholesterol Oxidase - IDMS
	mg/dl	284	247	321	18.50	37.00	
CK Total	U/l	542	445	639	48.50	97.00	CK-NAC serum start (DGKC) 37°C
	U/l	339	279	399	30.00	60.00	CK-NAC serum start (DGKC) 30°C
	U/l	230	189	271	20.50	41.00	CK-NAC serum start (DGKC) 25°C
	U/l	520	426	614	47.00	94.00	CK-NAC substrate start (DGKC) 37°C
	U/l	326	267	385	29.50	59.00	CK-NAC substrate start (DGKC) 30°C
	U/l	221	181	261	20.00	40.00	CK-NAC substrate start (DGKC) 25°C
	U/l	527	432	622	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	330	270	390	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	442	353	531	44.50	89.00	Alkaline picrate with deproteinization
	mg/dl	4.99	3.99	5.99	0.50	1.00	
	µmol/l	439	351	527	44.00	88.00	Alkaline picrate no deproteinization
	mg/dl	4.96	3.97	5.95	0.50	0.99	
	µmol/l	447	358	536	44.50	89.00	Roche Creatinine Plus
	mg/dl	5.05	4.05	6.05	0.50	1.00	
	µmol/l	416	333	499	41.50	83.00	Jaffe rate blanked
	mg/dl	4.70	3.76	5.64	0.47	0.94	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	431	345	517	43.00	86.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.87	3.90	5.84	0.49	0.97	
	µmol/l	430	344	516	43.00	86.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.86	3.89	5.83	0.49	0.97	
	µmol/l	434	348	520	43.00	86.00	IDMS traceable
	mg/dl	4.90	3.93	5.87	0.49	0.97	
gamma-GT	U/l	180	153	207	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	142	121	163	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	111	94	128	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	190	162	218	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	150	128	172	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	100	134	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
	mmol/l	15.8	13.5	18.1	1.15	2.30	Glucose oxidase
	mg/dl	285	243	327	21.00	42.00	
HDL - Cholesterol	mmol/l	3.04	2.58	3.50	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	117	99.6	134	8.70	17.40	
Iron	µmol/l	36.3	29.8	42.8	3.25	6.50	Colorimetric with ppt.
	µg/dl	203	167	239	18.00	36.00	
	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	165	239	18.50	37.00	
Lactate	mmol/l	5.47	4.49	6.45	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.3	40.5	58.1	4.40	8.80	
LD (LDH)	U/l	401	341	461	30.00	60.00	L->P 37°C
	U/l	290	246	334	22.00	44.00	L->P 30°C
	U/l	203	173	233	15.00	30.00	L->P 25°C

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	396	336	456	30.00	60.00	L->P IFCC 37°C
	U/l	286	243	329	21.50	43.00	L->P IFCC 30°C
	U/l	201	170	232	15.50	31.00	L->P IFCC 25°C
Lipase	U/l	66	53	79	6.50	13.00	Roche Colorimetric 37°C
	U/l	68	54	82	7.00	14.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.99	1.75	2.23	0.12	0.24	Ion selective electrode
	mg/dl	1.38	1.22	1.54	0.08	0.16	
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	
	mmol/l	1.71	1.50	1.92	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.16	3.65	4.67	0.26	0.51	
Phosphate Inorganic	mmol/l	2.36	2.00	2.72	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.32	6.20	8.44	0.56	1.12	
	mmol/l	2.36	2.00	2.72	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.32	6.20	8.44	0.56	1.12	
Potassium	mmol/l	6.16	5.67	6.65	0.25	0.49	ISE method - indirect
Protein Total	g/l	42.9	34.3	51.5	4.30	8.60	Biuret reaction end point
	g/dl	4.29	3.43	5.15	0.43	0.86	
	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	38.2	30.2	46.2	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	214	169	259	22.50	45.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.97	2.50	3.44	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	263	221	305	21.00	42.00	
	mmol/l	2.91	2.44	3.38	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	258	216	300	21.00	42.00	
	mmol/l	2.97	2.49	3.45	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	263	220	306	21.50	43.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease end point
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.27	10.7	0.61	1.22	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.41	8.20	10.6	0.61	1.21	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.5	26.7	36.3	2.40	4.80	Bromocresol Green
	g/dl	3.15	2.67	3.63	0.24	0.48	
Alkaline Phosphatase	U/l	450	383	517	33.50	67.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	34.6	27.4	41.8	3.60	7.20	Diazo with Dichloroaniline (DCA)
	mg/dl	2.02	1.60	2.44	0.21	0.42	
Bilirubin Total	µmol/l	89.4	70.7	108	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.23	4.14	6.32	0.55	1.09	
Calcium	mmol/l	3.05	2.74	3.36	0.16	0.31	Arsenazo III
	mg/dl	12.2	11.0	13.4	0.60	1.20	
Cholesterol	mmol/l	7.62	6.63	8.61	0.50	0.99	Cholesterol Oxidase - Abell Kendall
	mg/dl	294	256	332	19.00	38.00	
	mmol/l	7.44	6.47	8.41	0.49	0.97	Cholesterol Oxidase - IDMS
	mg/dl	287	250	324	18.50	37.00	
CK Total	U/l	595	488	702	53.50	107.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	408	326	490	41.00	82.00	Alkaline picrate no deproteinization
	mg/dl	4.61	3.68	5.54	0.47	0.93	
	µmol/l	455	364	546	45.50	91.00	Creatinine PAP method
	mg/dl	5.14	4.11	6.17	0.52	1.03	
gamma-GT	U/l	179	152	206	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	193	164	222	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	16.3	13.9	18.7	1.20	2.40	Hexokinase
	mg/dl	294	250	338	22.00	44.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.24	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	2.25	1.91	2.59	0.17	0.34	HDL - Ultra
	mg/dl	86.9	73.7	100	6.60	13.20	
Iron	µmol/l	34.0	27.9	40.1	3.05	6.10	Colorimetric without ppt.
	µg/dl	190	156	224	17.00	34.00	
LD (LDH)	U/l	399	339	459	30.00	60.00	L->P IFCC 37°C
Magnesium	mmol/l	1.70	1.49	1.91	0.11	0.21	Xylidyl Blue
	mg/dl	4.13	3.62	4.64	0.26	0.51	
Phosphate Inorganic	mmol/l	2.35	2.00	2.70	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.29	6.20	8.38	0.55	1.09	
Protein Total	g/l	49.6	39.7	59.5	4.95	9.90	Biuret reaction end point
	g/dl	4.96	3.97	5.95	0.50	0.99	
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	2.99	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	18.7	15.9	21.5	1.40	2.80	Urease end point
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	19.8	16.9	22.7	1.45	2.90	Urease kinetic
	mg/dl	119	102	136	8.50	17.00	

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Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.62	0.54	0.70	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.4	9.04	11.8	0.68	1.36	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			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	351	298	404	26.50	53.00	Randox AMP 37°C
	U/l	273	232	314	20.50	41.00	Randox AMP 30°C
	U/l	224	190	258	17.00	34.00	Randox AMP 25°C
ALT (GPT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
	U/l	110	87	133	11.50	23.00	Tris buffer without P5P 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	290	247	333	21.50	43.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	148	119	177	14.50	29.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	57	83	6.50	13.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	43.1	34.5	51.7	4.30	8.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	34.1	26.9	41.3	3.60	7.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.99	1.57	2.41	0.21	0.42	
Bilirubin Total	µmol/l	98.7	78.0	119	10.35	20.70	Diazo with Dichloroaniline (DCA)
	mg/dl	5.77	4.56	6.98	0.61	1.21	
Calcium	mmol/l	3.11	2.79	3.43	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.39	6.43	8.35	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	248	322	18.50	37.00	
CK Total	U/l	557	457	657	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	349	286	412	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	237	194	280	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	417	334	500	41.50	83.00	Alkaline picrate with deproteinization
	mg/dl	4.71	3.77	5.65	0.47	0.94	
	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked
	mg/dl	4.31	3.45	5.17	0.43	0.86	
gamma-GT	U/l	184	156	212	14.00	28.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	145	123	167	11.00	22.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	114	96	132	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	177	151	203	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	119	159	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	205	174	236	15.50	31.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	162	137	187	12.50	25.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	126	107	145	9.50	19.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.48	2.11	2.85	0.19	0.37	Direct Clearance Method
	mg/dl	95.7	81.4	110	7.15	14.30	
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	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	403	343	463	30.00	60.00	L->P IFCC 37°C
	U/l	291	248	334	21.50	43.00	L->P IFCC 30°C
	U/l	204	174	234	15.00	30.00	L->P IFCC 25°C
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Xylidyl Blue
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.39	2.03	2.75	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.41	6.29	8.53	0.56	1.12	
Potassium	mmol/l	6.19	5.70	6.68	0.25	0.49	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	159	151	167	4.00	8.00	ISE method - indirect
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	3.01	2.53	3.49	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	2.90	2.44	3.36	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	257	216	298	20.50	41.00	
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease end point
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.8	16.9	22.7	1.45	2.90	Urease kinetic
	mg/dl	119	102	136	8.50	17.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.55	0.47	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.12	7.95	10.3	0.59	1.17	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.21	8.01	10.4	0.60	1.20	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.8	25.4	34.2	2.20	4.40	Bromocresol Green
	g/dl	2.98	2.54	3.42	0.22	0.44	
Alkaline Phosphatase	U/l	350	297	403	26.50	53.00	AMP optimised to IFCC 37°C
	U/l	273	231	315	21.00	42.00	AMP optimised to IFCC 30°C
	U/l	224	190	258	17.00	34.00	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
Amylase Total	U/l	296	252	340	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	137	109	165	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	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	101	80.0	122	10.50	21.00	Diazo with Sulphanilic Acid
	mg/dl	5.91	4.68	7.14	0.62	1.23	
	µmol/l	98.7	77.9	120	10.40	20.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.77	4.56	6.98	0.61	1.21	
Calcium	mmol/l	3.18	2.87	3.49	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	110	102	118	4.00	8.00	ISE indirect

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Cholesterol	mmol/l	7.33	6.38	8.28	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	283	246	320	18.50	37.00	
Cholinesterase	U/l	5297	4238	6356	529.50	1059.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	552	452	652	50.00	100.00	CK-NAC (IFCC) 37°C
	U/l	346	283	409	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	235	192	278	21.50	43.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	431	344	518	43.50	87.00	Alkaline picrate no deproteinization
	mg/dl	4.87	3.89	5.85	0.49	0.98	
	µmol/l	482	386	578	48.00	96.00	Creatinine PAP method
	mg/dl	5.45	4.36	6.54	0.55	1.09	
	µmol/l	452	362	542	45.00	90.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	5.11	4.09	6.13	0.51	1.02	
gamma-GT	U/l	178	151	205	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	140	119	161	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	110	93	127	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	179	152	206	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	141	120	162	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	110	94	126	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	2.13	1.81	2.45	0.16	0.32	Direct HDL Immunoseparation
	mg/dl	82.2	69.9	94.5	6.15	12.30	
	mmol/l	2.51	2.13	2.89	0.19	0.38	HDL - Ultra
	mg/dl	96.9	82.2	112	7.35	14.70	
Iron	µmol/l	35.9	29.5	42.3	3.20	6.40	Colorimetric without ppt.
	µg/dl	201	165	237	18.00	36.00	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	727	618	836	54.50	109.00	P->L German methods 37°C
	U/l	525	446	604	39.50	79.00	P->L German methods 30°C
	U/l	369	313	425	28.00	56.00	P->L German methods 25°C
	U/l	820	697	943	61.50	123.00	P->L SFBC 37°C
	U/l	592	503	681	44.50	89.00	P->L SFBC 30°C
	U/l	416	353	479	31.50	63.00	P->L SFBC 25°C
Lipase	U/l	73	59	87	7.00	14.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.76	1.54	1.98	0.11	0.22	Xylidyl Blue
	mg/dl	4.28	3.74	4.82	0.27	0.54	
	mmol/l	1.75	1.54	1.96	0.11	0.21	Enzymatic
	mg/dl	4.25	3.74	4.76	0.26	0.51	
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Potassium	mmol/l	6.16	5.67	6.65	0.25	0.49	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
Triglycerides	mmol/l	3.04	2.56	3.52	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	269	227	311	21.00	42.00	
	mmol/l	3.02	2.54	3.50	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	267	225	309	21.00	42.00	
Urea	mmol/l	20.4	17.4	23.4	1.50	3.00	Urease kinetic
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	BUN
	mg/dl	57.3	48.7	65.9	4.30	8.60	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.51	0.45	0.58	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.60	7.48	9.72	0.56	1.12	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.11	7.91	10.3	0.60	1.20	

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

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Green
	g/dl	2.94	2.50	3.38	0.22	0.44	
Alkaline Phosphatase	U/l	329	280	378	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	256	218	294	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	210	179	241	15.50	31.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	162	129	195	16.50	33.00	Colorimetric 37°C
	U/l	120	95	145	12.50	25.00	Colorimetric 30°C
	U/l	91	73	109	9.00	18.00	Colorimetric 25°C
	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	110	88	132	11.00	22.00	Tris buffer without P5P 30°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	153	122	184	15.50	31.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	73	58	88	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	34.8	27.5	42.1	3.65	7.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.04	1.61	2.47	0.22	0.43	
Bilirubin Total	µmol/l	89.9	71.1	109	9.40	18.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.26	4.16	6.36	0.55	1.10	
	µmol/l	97.2	76.8	118	10.20	20.40	Nitrobenzenediazonium salt
	mg/dl	5.69	4.49	6.89	0.60	1.20	
Calcium	mmol/l	3.27	2.94	3.60	0.17	0.33	Arsenazo III
	mg/dl	13.1	11.8	14.4	0.65	1.30	

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

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28 **Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	110	101	119	4.50	9.00	Colorimetric
	mmol/l	115	106	124	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.39	6.43	8.35	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	mg/dl	285	248	322	18.50	37.00	
	mmol/l	7.26	6.31	8.21	0.48	0.95	Cholesterol Oxidase - IDMS
	mg/dl	280	244	316	18.00	36.00	
CK Total	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
Creatinine	µmol/l	411	329	493	41.00	82.00	Alkaline picrate no deproteinization
	mg/dl	4.64	3.72	5.56	0.46	0.92	
	µmol/l	446	357	535	44.50	89.00	Enzymatic UV method
	mg/dl	5.04	4.03	6.05	0.51	1.01	
	µmol/l	444	356	532	44.00	88.00	Creatinine PAP method
	mg/dl	5.02	4.02	6.02	0.50	1.00	
	µmol/l	452	362	542	45.00	90.00	Jaffe rate blanked
	mg/dl	5.11	4.09	6.13	0.51	1.02	
	µmol/l	433	346	520	43.50	87.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.89	3.91	5.87	0.49	0.98	
gamma-GT	U/l	181	154	208	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	121	165	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	95	129	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	

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

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.91	2.47	3.35	0.22	0.44	Direct HDL PEGME
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	2.69	2.29	3.09	0.20	0.40	Direct Clearance Method
	mg/dl	104	88.4	120	7.80	15.60	
Iron	µmol/l	37.9	31.1	44.7	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
LD (LDH)	U/l	385	327	443	29.00	58.00	L->P IFCC 37°C
	U/l	278	236	320	21.00	42.00	L->P IFCC 30°C
	U/l	195	166	224	14.50	29.00	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	2.41	2.05	2.77	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.47	6.36	8.58	0.56	1.11	
	mmol/l	2.39	2.03	2.75	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.41	6.29	8.53	0.56	1.12	
Potassium	mmol/l	6.06	5.57	6.55	0.25	0.49	ISE method - direct
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Biuret reaction end point
	g/dl	4.64	3.71	5.57	0.47	0.93	
Sodium	mmol/l	154	147	161	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	265	222	308	21.50	43.00	
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	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	

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

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	BUN
	mg/dl	54.2	46.1	62.3	4.05	8.10	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.64	8.38	10.9	0.63	1.26	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.48	8.23	10.7	0.63	1.25	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.36	8.15	10.6	0.61	1.21	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	410	324	496	43.00	86.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	310	245	375	32.50	65.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	232	183	281	24.50	49.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	40.5	27.1	53.9	6.70	13.40	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	28.0	23.8	32.2	2.10	4.20	Bromocresol Purple
	g/dl	2.80	2.38	3.22	0.21	0.42	
	g/l	28.6	24.3	32.9	2.15	4.30	Ortho Vitros Microslide Systems
	g/dl	2.86	2.43	3.29	0.22	0.43	
	g/l	28.6	24.3	32.9	2.15	4.30	Turbidimetric Assays
	g/dl	2.86	2.43	3.29	0.22	0.43	
Alkaline Phosphatase	U/l	265	225	305	20.00	40.00	Ortho Vitros Microslide Systems 37°C
	U/l	430	365	495	32.50	65.00	Diethanolamine buffer DEA 37°C
	U/l	335	284	386	25.50	51.00	Diethanolamine buffer DEA 30°C
	U/l	275	233	317	21.00	42.00	Diethanolamine buffer DEA 25°C
	U/l	340	289	391	25.50	51.00	AMP optimised to IFCC 37°C
	U/l	265	225	305	20.00	40.00	AMP optimised to IFCC 30°C
	U/l	217	185	249	16.00	32.00	AMP optimised to IFCC 25°C
	U/l	338	287	389	25.50	51.00	AMP non-optimised 37°C
	U/l	263	224	302	19.50	39.00	AMP non-optimised 30°C
	U/l	216	183	249	16.50	33.00	AMP non-optimised 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Alkaline Phosphatase	U/l	319	271	367	24.00	48.00	Colorimetric 37°C
	U/l	249	211	287	19.00	38.00	Colorimetric 30°C
	U/l	204	173	235	15.50	31.00	Colorimetric 25°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Colorimetric 37°C
	U/l	107	86	128	10.50	21.00	Colorimetric 30°C
	U/l	82	65	99	8.50	17.00	Colorimetric 25°C
	U/l	152	122	182	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	151	121	181	15.00	30.00	Tris buffer with P5P 37°C
	U/l	112	90	134	11.00	22.00	Tris buffer with P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer with P5P 25°C
	U/l	142	113	171	14.50	29.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
	U/l	149	119	179	15.00	30.00	Phosphate buffer DGKC 37°C
	U/l	110	88	132	11.00	22.00	Phosphate buffer DGKC 30°C
	U/l	84	67	101	8.50	17.00	Phosphate buffer DGKC 25°C
	U/l	147	118	176	14.50	29.00	Tris buffer with P5P NVKC 37°C
	U/l	109	87	131	11.00	22.00	Tris buffer with P5P NVKC 30°C
	U/l	83	66	100	8.50	17.00	Tris buffer with P5P NVKC 25°C
	U/l	143	114	172	14.50	29.00	Tris buffer SCE 37°C
	U/l	106	84	128	11.00	22.00	Tris buffer SCE 30°C
	U/l	81	64	98	8.50	17.00	Tris buffer SCE 25°C
	U/l	151	121	181	15.00	30.00	Ortho Vitros MicroSlide visible 37°C
Amylase Pancreatic	U/l	260	221	299	19.50	39.00	Immunoinhibition EPS substrate 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Pancreatic	U/l	252	214	290	19.00	38.00	Roche EPS Liquid 37°C
	U/l	290	247	333	21.50	43.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	303	258	348	22.50	45.00	pNP Maltotrioside substrates 37°C
	U/l	297	253	341	22.00	44.00	Siemens - blocked pNPG7 37°C
	U/l	234	199	269	17.50	35.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	304	258	350	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	334	284	384	25.00	50.00	Siemens - maltopenta/hexaoside 37°C
	U/l	279	237	321	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	182	155	209	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	274	233	315	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	274	233	315	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	335	285	385	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
	U/l	295	251	339	22.00	44.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	292	248	336	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	296	252	340	22.00	44.00	Beckman Synchron AMY7 37°C
	U/l	296	252	340	22.00	44.00	I.L. 2-chloro-pNPG3 37°C
	U/l	329	279	379	25.00	50.00	Abbott Architect IFCC Cal. 37°C
	U/l	313	266	360	23.50	47.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	288	244	332	22.00	44.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	275	234	316	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.10	0.90	1.30	0.10	0.20	Immunoturbidimetric
	mg/dl	110	90.2	130	9.90	19.80	
Apolipoprotein B	g/l	0.65	0.54	0.77	0.06	0.12	Immunoturbidimetric
	mg/dl	65.3	53.5	77.1	5.90	11.80	
AST (GOT)	U/l	142	114	170	14.00	28.00	Colorimetric 37°C
	U/l	96	77	115	9.50	19.00	Colorimetric 30°C
	U/l	68	54	82	7.00	14.00	Colorimetric 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	185	148	222	18.50	37.00	Ortho Vitros Microslide visible slide 37°C
	U/l	172	138	206	17.00	34.00	Tris buffer with P5P 37°C
	U/l	116	93	139	11.50	23.00	Tris buffer with P5P 30°C
	U/l	82	66	98	8.00	16.00	Tris buffer with P5P 25°C
	U/l	142	113	171	14.50	29.00	Tris buffer without P5P 37°C
	U/l	96	76	116	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
	U/l	139	111	167	14.00	28.00	Phosphate buffer DGKC 37°C
	U/l	94	75	113	9.50	19.00	Phosphate buffer DGKC 30°C
	U/l	66	53	79	6.50	13.00	Phosphate buffer DGKC 25°C
	U/l	141	113	169	14.00	28.00	Tris buffer with P5P NVKC 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer with P5P NVKC 30°C
	U/l	67	54	80	6.50	13.00	Tris buffer with P5P NVKC 25°C
	U/l	146	117	175	14.50	29.00	Tris buffer SCE 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer SCE 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	13.6	10.8	16.4	1.40	2.80	Colorimetric
	mmol/l	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
	mmol/l	14.4	11.5	17.3	1.45	2.90	Enzymatic
Bile Acids	µmol/l	41.9	33.5	50.3	4.20	8.40	4th Generation Colorimetric
	µmol/l	43.1	34.5	51.7	4.30	8.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	36.6	28.9	44.3	3.85	7.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.14	1.69	2.59	0.23	0.45	

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Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	35.6	28.2	43.0	3.70	7.40	Diazo with Sulphanilic Acid
	mg/dl	2.08	1.65	2.51	0.22	0.43	
	µmol/l	37.8	29.9	45.7	3.95	7.90	Diazo with Dichloroaniline (DCA)
	mg/dl	2.21	1.75	2.67	0.23	0.46	
	µmol/l	39.6	31.3	47.9	4.15	8.30	Oxidation to Biliverdin/Vanadate
	mg/dl	2.32	1.83	2.81	0.25	0.49	
	µmol/l	38.3	30.3	46.3	4.00	8.00	Modified Jendrassik
	mg/dl	2.24	1.77	2.71	0.24	0.47	
Bilirubin Total	µmol/l	96.5	76.3	117	10.10	20.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	5.65	4.46	6.84	0.60	1.19	
	µmol/l	99.2	78.4	120	10.40	20.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.80	4.59	7.01	0.61	1.21	
	µmol/l	96.6	76.4	117	10.10	20.20	Diazo with Sulphanilic Acid
	mg/dl	5.65	4.47	6.83	0.59	1.18	
	µmol/l	92.7	73.2	112	9.75	19.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.42	4.28	6.56	0.57	1.14	
	µmol/l	97.3	76.8	118	10.25	20.50	Nitrobenzenediazonium salt
	mg/dl	5.69	4.49	6.89	0.60	1.20	
	µmol/l	91.5	72.3	111	9.60	19.20	Diazonium ion
	mg/dl	5.35	4.23	6.47	0.56	1.12	
	µmol/l	108	85.1	131	11.45	22.90	Oxidation to Biliverdin/Vanadate
	mg/dl	6.32	4.98	7.66	0.67	1.34	
	µmol/l	106	83.7	128	11.15	22.30	Modified Jendrassik
	mg/dl	6.20	4.90	7.50	0.65	1.30	
Calcium	mmol/l	3.10	2.79	3.41	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.2	13.6	0.60	1.20	

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Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	3.02	2.72	3.32	0.15	0.30	Ion selective electrode
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	3.14	2.82	3.46	0.16	0.32	Methylthymol blue
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Phosphonazo
	mg/dl	12.4	11.2	13.6	0.60	1.20	
	mmol/l	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	1.17	1.05	1.29	0.06	0.12	Ionised calcium
	mg/dl	4.69	4.21	5.17	0.24	0.48	
Chloride	mmol/l	112	103	121	4.50	9.00	Colorimetric
	mmol/l	114	104	124	5.00	10.00	Ortho Vitros Microslide Systems
	mmol/l	112	103	121	4.50	9.00	ISE indirect
	mmol/l	113	104	122	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	274	239	309	17.50	35.00	
	mmol/l	7.40	6.43	8.37	0.49	0.97	Cholesterol Oxidase - Abell Kendall
	mg/dl	286	248	324	19.00	38.00	
	mmol/l	7.44	6.47	8.41	0.49	0.97	Cholesterol Oxidase - IDMS
	mg/dl	287	250	324	18.50	37.00	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.37	6.41	8.33	0.48	0.96	Cholesterol Dehydrogenase
	mg/dl	284	247	321	18.50	37.00	
Cholinesterase	U/l	5086	4069	6103	508.50	1017.00	Colorimetric Benzoylcholine 37°C
	U/l	5288	4230	6346	529.00	1058.00	Colorimetric Butyrylthiocholine 37°C
	U/l	4903	3922	5884	490.50	981.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	440	361	519	39.50	79.00	Ortho Vitros Microslide Systems 37°C
	U/l	538	441	635	48.50	97.00	CK-NAC serum start (DGKC) 37°C
	U/l	337	276	398	30.50	61.00	CK-NAC serum start (DGKC) 30°C
	U/l	229	187	271	21.00	42.00	CK-NAC serum start (DGKC) 25°C
	U/l	533	437	629	48.00	96.00	CK-NAC substrate start (DGKC) 37°C
	U/l	334	274	394	30.00	60.00	CK-NAC substrate start (DGKC) 30°C
	U/l	227	186	268	20.50	41.00	CK-NAC substrate start (DGKC) 25°C
	U/l	532	436	628	48.00	96.00	CK-NAC (IFCC) 37°C
	U/l	333	273	393	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	226	185	267	20.50	41.00	CK-NAC (IFCC) 25°C
	U/l	571	468	674	51.50	103.00	Monothioglycerol 37°C
	U/l	357	293	421	32.00	64.00	Monothioglycerol 30°C
	U/l	243	199	287	22.00	44.00	Monothioglycerol 25°C
	U/l	527	432	622	47.50	95.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	330	270	390	30.00	60.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	224	184	264	20.00	40.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	26.6	21.3	31.9	2.65	5.30	Atomic absorption
	µg/dl	169	135	203	17.00	34.00	
	µmol/l	25.3	20.2	30.4	2.55	5.10	Colorimetric
	µg/dl	161	128	194	16.50	33.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cortisol	nmol/l	1061	796	1326	132.50	265.00	Roche Cobas e801
	µg/dl	38.2	28.7	47.7	4.75	9.50	
Creatinine	µmol/l	414	331	497	41.50	83.00	Alkaline picrate with deproteinization
	mg/dl	4.68	3.74	5.62	0.47	0.94	
	µmol/l	420	336	504	42.00	84.00	Alkaline picrate no deproteinization
	mg/dl	4.75	3.80	5.70	0.48	0.95	
	µmol/l	446	357	535	44.50	89.00	Enzymatic UV method
	mg/dl	5.04	4.03	6.05	0.51	1.01	
	µmol/l	444	355	533	44.50	89.00	Creatinine PAP method
	mg/dl	5.02	4.01	6.03	0.51	1.01	
	µmol/l	405	324	486	40.50	81.00	Jaffe rate blanked
	mg/dl	4.58	3.66	5.50	0.46	0.92	
	µmol/l	440	352	528	44.00	88.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.97	3.98	5.96	0.50	0.99	
	µmol/l	456	365	547	45.50	91.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	5.15	4.12	6.18	0.52	1.03	
	µmol/l	432	345	519	43.50	87.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.88	3.90	5.86	0.49	0.98	
	µmol/l	461	369	553	46.00	92.00	Vitros IDMS Traceable
	mg/dl	5.21	4.17	6.25	0.52	1.04	
	µmol/l	439	352	526	43.50	87.00	IDMS traceable
	mg/dl	4.96	3.98	5.94	0.49	0.98	
D-3-Hydroxybutyrate	mmol/l	1.17	0.99	1.35	0.09	0.18	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.89	3.11	4.67	0.39	0.78	Immunoturbidimetric
	ng/ml	3.04	2.43	3.65	0.31	0.61	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Folate	nmol/l	7.14	5.43	8.85	0.86	1.71	Roche Cobas e801
	ng/ml	3.15	2.39	3.91	0.38	0.76	
Free T4	pmol/l	58.3	43.8	72.8	7.25	14.50	Abbott Architect
	ng/dl	4.55	3.42	5.68	0.57	1.13	
	pg/ml	45.5	34.2	56.8	5.65	11.30	Abbott Architect
	pmol/l	83.7	62.8	105	10.45	20.90	Siemens Centaur XP/XPT/Classic
	ng/dl	6.53	4.90	8.16	0.82	1.63	
	pg/ml	65.3	49.0	81.6	8.15	16.30	Siemens Centaur XP/XPT/Classic
	pmol/l	83.6	62.7	105	10.45	20.90	Siemens Immulite 2000/2500
	ng/dl	6.52	4.89	8.15	0.82	1.63	
	pg/ml	65.2	48.9	81.5	8.15	16.30	Siemens Immulite 2000/2500
	pmol/l	76.9	57.7	96.1	9.60	19.20	Siemens Immulite 1000
	ng/dl	6.00	4.50	7.50	0.75	1.50	
	pg/ml	60.0	45.0	75.0	7.50	15.00	Siemens Immulite 1000
	pmol/l	70.3	52.8	87.8	8.75	17.50	Beckman DxI800
	ng/dl	5.48	4.12	6.84	0.68	1.36	
	pg/ml	54.8	41.2	68.4	6.80	13.60	Beckman DxI800
	pmol/l	93.7	70.3	117	11.70	23.40	Roche Elecsys
	ng/dl	7.31	5.48	9.14	0.92	1.83	
	pg/ml	73.1	54.8	91.4	9.15	18.30	Roche Elecsys
	pmol/l	68.7	51.5	85.9	8.60	17.20	Beckman Access
	ng/dl	5.36	4.02	6.70	0.67	1.34	
	pg/ml	53.6	40.2	67.0	6.70	13.40	Beckman Access
	pmol/l	94.2	70.7	118	11.75	23.50	Tosoh Series
	ng/dl	7.35	5.51	9.19	0.92	1.84	
	pg/ml	73.5	55.1	91.9	9.20	18.40	Tosoh Series

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	89.4	67.0	112	11.20	22.40	Vitros ECi
	ng/dl	6.97	5.23	8.71	0.87	1.74	
	pg/ml	69.7	52.3	87.1	8.70	17.40	Vitros ECi
	pmol/l	92.6	69.5	116	11.55	23.10	Roche Cobas 4000/E411
	ng/dl	7.22	5.42	9.02	0.90	1.80	
	pg/ml	72.2	54.2	90.2	9.00	18.00	Roche Cobas 4000/E411
	pmol/l	91.5	68.6	114	11.45	22.90	Roche Cobas e601/602
	ng/dl	7.14	5.35	8.93	0.90	1.79	
	pg/ml	71.4	53.5	89.3	8.95	17.90	Roche Cobas e601/602
	pmol/l	85.7	64.3	107	10.70	21.40	Biomerieux Vidas FT4N Kit
	ng/dl	6.68	5.02	8.34	0.83	1.66	
	pg/ml	66.8	50.2	83.4	8.30	16.60	Biomerieux Vidas FT4N Kit
	pmol/l	111	83.2	139	13.90	27.80	Siemens Dimension Exl LOCI
	ng/dl	8.66	6.49	10.8	1.09	2.17	
	pg/ml	86.6	64.9	108	10.85	21.70	Siemens Dimension Exl LOCI
	pmol/l	66.7	50.0	83.4	8.35	16.70	Mindray CL-2000i
	ng/dl	5.20	3.90	6.50	0.65	1.30	
	pg/ml	52.0	39.0	65.0	6.50	13.00	Mindray CL-2000i
	pmol/l	99.0	74.2	124	12.40	24.80	Roche Cobas e801
	ng/dl	7.72	5.79	9.65	0.97	1.93	
	pg/ml	77.2	57.9	96.5	9.65	19.30	Roche Cobas e801
Gentamicin	µmol/l	19.9	15.9	23.9	2.00	4.00	Immunoturbidimetric
	µg/ml	9.51	7.60	11.4	0.96	1.91	
gamma-GT	U/l	177	151	203	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	139	119	159	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	109	93	125	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	218	185	251	16.50	33.00	Ortho Vitros Microslide Systems 37°C
	U/l	169	143	195	13.00	26.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	133	113	153	10.00	20.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	104	88	120	8.00	16.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	185	158	212	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	146	125	167	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	114	97	131	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	205	174	236	15.50	31.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	162	137	187	12.50	25.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	126	107	145	9.50	19.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	32	25	39	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	25	19	31	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	20	16	24	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.8	12.6	17.0	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	267	227	307	20.00	40.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose dehydrogenase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Oxygen electrode
	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	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.58	2.19	2.97	0.20	0.39	Direct HDL PPD
	mg/dl	99.6	84.5	115	7.55	15.10	
	mmol/l	2.44	2.07	2.81	0.19	0.37	Direct HDL Immunoseparation
	mg/dl	94.2	79.9	109	7.15	14.30	
	mmol/l	2.26	1.92	2.60	0.17	0.34	Vitros Magnetic HDL
	mg/dl	87.2	74.1	100	6.55	13.10	
	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	
	mmol/l	2.47	2.10	2.84	0.19	0.37	Direct Clearance Method
	mg/dl	95.3	81.1	110	7.10	14.20	
	mmol/l	2.26	1.92	2.60	0.17	0.34	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	87.2	74.1	100	6.55	13.10	
	mmol/l	2.40	2.04	2.76	0.18	0.36	HDL - Ultra
	mg/dl	92.6	78.7	107	6.95	13.90	
	mmol/l	2.94	2.50	3.38	0.22	0.44	Direct HDL Roche 4th Generation
	mg/dl	113	96.5	130	8.25	16.50	
Immunoglobulin A	g/l	1.74	1.31	2.17	0.22	0.43	Immunoturbidimetric
	mg/dl	174	131	217	21.50	43.00	
Immunoglobulin G	g/l	6.23	5.11	7.35	0.56	1.12	Immunoturbidimetric
	mg/dl	623	511	735	56.00	112.00	
Immunoglobulin M	g/l	0.83	0.66	0.99	0.08	0.17	Immunoturbidimetric
	mg/dl	82.5	66.0	99.0	8.25	16.50	
Iron	µmol/l	35.4	29.1	41.7	3.15	6.30	Colorimetric with ppt.
	µg/dl	198	163	233	17.50	35.00	
	µmol/l	35.7	29.3	42.1	3.20	6.40	Colorimetric without ppt.
	µg/dl	200	164	236	18.00	36.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	33.3	27.3	39.3	3.00	6.00	Ortho Vitros Microslide Systems
	µg/dl	186	153	219	16.50	33.00	
Lactate	mmol/l	5.41	4.44	6.38	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.7	40.0	57.4	4.35	8.70	
	mmol/l	5.09	4.18	6.00	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.9	37.7	54.1	4.10	8.20	
	mmol/l	5.22	4.28	6.16	0.47	0.94	Ion selective electrode
	mg/dl	47.0	38.6	55.4	4.20	8.40	
	mmol/l	5.50	4.51	6.49	0.50	0.99	UV LDH
	mg/dl	49.6	40.6	58.6	4.50	9.00	
LD (LDH)	U/l	374	318	430	28.00	56.00	L->P 37°C
	U/l	270	230	310	20.00	40.00	L->P 30°C
	U/l	190	161	219	14.50	29.00	L->P 25°C
	U/l	789	670	908	59.50	119.00	P->L Scandinavian & Dutch 37°C
	U/l	570	484	656	43.00	86.00	P->L Scandinavian & Dutch 30°C
	U/l	400	340	460	30.00	60.00	P->L Scandinavian & Dutch 25°C
	U/l	758	644	872	57.00	114.00	P->L German methods 37°C
	U/l	547	465	629	41.00	82.00	P->L German methods 30°C
	U/l	384	327	441	28.50	57.00	P->L German methods 25°C
	U/l	746	634	858	56.00	112.00	P->L SFBC 37°C
	U/l	539	458	620	40.50	81.00	P->L SFBC 30°C
	U/l	378	321	435	28.50	57.00	P->L SFBC 25°C
	U/l	387	329	445	29.00	58.00	L->P IFCC 37°C
	U/l	279	238	320	20.50	41.00	L->P IFCC 30°C
	U/l	196	167	225	14.50	29.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	417	354	480	31.50	63.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	68	54	82	7.00	14.00	Other Colorimetric 37°C
	U/l	759	608	910	75.50	151.00	Ortho Vitros Microslide Systems 37°C
	U/l	71	57	85	7.00	14.00	Roche Colorimetric 37°C
	U/l	90	72	108	9.00	18.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.40	2.12	2.68	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	1.67	1.47	1.87	0.10	0.20	
	mmol/l	1.92	1.69	2.15	0.12	0.23	Flame photometry
	mg/dl	1.33	1.17	1.49	0.08	0.16	
	mmol/l	2.01	1.77	2.25	0.12	0.24	Ion selective electrode
	mg/dl	1.40	1.23	1.57	0.09	0.17	
	mmol/l	2.01	1.77	2.25	0.12	0.24	Spectrophotometric
	mg/dl	1.40	1.23	1.57	0.09	0.17	
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Arsenazo III
	mg/dl	4.13	3.65	4.61	0.24	0.48	
	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	1.51	1.93	0.11	0.21	Atomic absorption
	mg/dl	4.18	3.67	4.69	0.26	0.51	
	mmol/l	1.68	1.48	1.88	0.10	0.20	Calmagite
	mg/dl	4.08	3.60	4.56	0.24	0.48	
	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	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Methylthymol blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
	mmol/l	1.71	1.51	1.91	0.10	0.20	Enzymatic
	mg/dl	4.16	3.67	4.65	0.25	0.49	
NEFA	mmol/l	0.46	0.37	0.55	0.05	0.09	Colorimetric
Osmolality	mOsm/kg	344	275	413	34.50	69.00	Calculated
	mOsm/kg	378	303	453	37.50	75.00	Freezing point depression
Paracetamol	mmol/l	0.60	0.48	0.71	0.06	0.12	Gravimetric
	mg/l	90.0	72.0	108	9.00	18.00	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	7.04	5.98	8.10	0.53	1.06	
	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.13	6.05	8.21	0.54	1.08	
	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	
Potassium	mmol/l	6.05	5.57	6.53	0.24	0.48	Ortho Vitros Microslide Systems
	mmol/l	6.25	5.75	6.75	0.25	0.50	Enzymatic
	mmol/l	5.95	5.47	6.43	0.24	0.48	Flame photometry
	mmol/l	6.03	5.54	6.52	0.25	0.49	ISE method - direct
	mmol/l	6.14	5.65	6.63	0.25	0.49	ISE method - indirect
	mmol/l	5.67	5.22	6.12	0.23	0.45	Colorimetric
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Ortho Vitros Microslide Systems
	g/dl	4.64	3.71	5.57	0.47	0.93	
	g/l	45.5	36.4	54.6	4.55	9.10	Biuret reaction end point
	g/dl	4.55	3.64	5.46	0.46	0.91	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	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	
PSA Total	ng/ml =	15.5	11.6	19.4	1.95	3.90	Tosoh Series
	ng/ml =	18.4	13.8	23.0	2.30	4.60	Siemens Immulite 1000
	ng/ml =	18.8	14.1	23.5	2.35	4.70	Roche Elecsys Modular E170
	ng/ml =	19.6	14.7	24.5	2.45	4.90	Beckman Access standardised to Hybritech
	ng/ml =	20.1	15.1	25.1	2.50	5.00	bioMerieux VIDAS TPSA
	ng/ml =	18.1	13.6	22.6	2.25	4.50	Siemens Centaur XP/XPT/Classic
	ng/ml =	18.5	13.9	23.1	2.30	4.60	Siemens Immulite 2000 1st Generation
	ng/ml =	16.8	12.6	21.0	2.10	4.20	Abbott Architect
	ng/ml =	19.4	14.5	24.3	2.45	4.90	Ortho Vitros ECi
	ng/ml =	19.1	14.4	23.8	2.35	4.70	Siemens Dimension
	ng/ml =	19.8	14.9	24.7	2.45	4.90	Cobas E411
	ng/ml =	20.0	15.0	25.0	2.50	5.00	Roche Cobas 6000/8000
	ng/ml =	20.0	15.0	25.0	2.50	5.00	Ortho Vitros 3600/5600/ECi PSA II
	ng/ml =	19.1	14.3	23.9	2.40	4.80	Beckman DXI standardised to Hybritech
	ng/ml =	17.1	12.8	21.4	2.15	4.30	Siemens Centaur CP
Salicylate	mmol/l	0.87	0.70	1.04	0.09	0.17	Gravimetric
	mg/dl	12.0	9.59	14.4	1.21	2.41	
Sodium	mmol/l	154	147	161	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	157	149	165	4.00	8.00	Enzymatic
	mmol/l	156	148	164	4.00	8.00	Flame photometry
	mmol/l	155	147	163	4.00	8.00	ISE method - direct
	mmol/l	158	150	166	4.00	8.00	ISE method - indirect

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	153	145	161	4.00	8.00	Colorimetric
Theophylline	µmol/l	139	111	167	14.00	28.00	Gravimetric
	µg/ml	25.0	20.0	30.0	2.50	5.00	
Thyroid Stimulating Hormone	µU/ml =	0.91	0.73	1.10	0.09	0.18	Abbott Architect
	µU/ml =	1.20	0.96	1.44	0.12	0.24	bioMerieux VIDAS TSH
	µU/ml =	1.26	1.01	1.51	0.13	0.25	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.18	0.94	1.42	0.12	0.24	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.22	0.98	1.46	0.12	0.24	Siemens Immulite 2000/2500
	µU/ml =	1.12	0.90	1.35	0.11	0.23	Siemens Immulite 1000
	µU/ml =	1.31	1.04	1.58	0.14	0.27	Roche Elecsys
	µU/ml =	1.13	0.91	1.35	0.11	0.22	Beckman Access Fast TSH
	µU/ml =	1.10	0.88	1.32	0.11	0.22	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.10	0.88	1.32	0.11	0.22	Tosoh Series
	µU/ml =	1.09	0.87	1.31	0.11	0.22	Vitros ECi
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Cobas 4000/E411
	µU/ml =	1.34	1.07	1.61	0.14	0.27	Roche Cobas e601/602
	µU/ml =	1.19	0.95	1.43	0.12	0.24	Monobind Inc. ELISA / CLIA
	µU/ml =	1.07	0.85	1.29	0.11	0.22	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	0.99	0.79	1.18	0.10	0.20	Siemens Centaur CP
	µU/ml =	1.09	0.87	1.31	0.11	0.22	Beckman DxI 600/800 Access (3rd IS)
	µU/ml =	1.55	1.24	1.86	0.16	0.31	Mindray CL-2000i
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Cobas e801
TIBC	µmol/l	35.7	28.2	43.2	3.75	7.50	Ortho Vitros Microslide Systems
	µg/dl	200	158	242	21.00	42.00	
	µmol/l	36.0	28.4	43.6	3.80	7.60	Removal of excess free iron
	µg/dl	201	159	243	21.00	42.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	39.1	30.9	47.3	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	219	173	265	23.00	46.00	
	µmol/l	38.8	30.7	46.9	4.05	8.10	Calculated from Transferrin
	µg/dl	217	172	262	22.50	45.00	
	µmol/l	46.5	36.7	56.3	4.90	9.80	Randox Direct
	µg/dl	260	205	315	27.50	55.00	
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	3.11	2.33	3.89	0.39	0.78	Abbott Architect
	ng/ml	2.02	1.52	2.52	0.25	0.50	
	ng/dl	202	152	252	25.00	50.00	Abbott Architect
	nmol/l	3.75	2.81	4.69	0.47	0.94	BioMerieux Vidas
	ng/ml	2.44	1.83	3.05	0.31	0.61	
	ng/dl	244	183	305	30.50	61.00	BioMerieux Vidas
	nmol/l	4.50	3.37	5.63	0.57	1.13	Siemens Centaur XP/XPT/Classic
	ng/ml	2.93	2.19	3.67	0.37	0.74	
	ng/dl	293	219	367	37.00	74.00	Siemens Centaur XP/XPT/Classic
	nmol/l	3.90	2.92	4.88	0.49	0.98	Siemens Immulite 2000/2500
	ng/ml	2.54	1.90	3.18	0.32	0.64	
	ng/dl	254	190	318	32.00	64.00	Siemens Immulite 2000/2500
	nmol/l	4.14	3.10	5.18	0.52	1.04	Siemens Immulite 1000
	ng/ml	2.70	2.02	3.38	0.34	0.68	
	ng/dl	270	202	338	34.00	68.00	Siemens Immulite 1000
	nmol/l	3.78	2.84	4.72	0.47	0.94	Beckman DxI800
	ng/ml	2.46	1.85	3.07	0.31	0.61	
	ng/dl	246	185	307	30.50	61.00	Beckman DxI800

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	4.08	3.06	5.10	0.51	1.02	Roche Elecsys
	ng/ml	2.66	1.99	3.33	0.34	0.67	
	ng/dl	266	199	333	33.50	67.00	Roche Elecsys
	nmol/l	3.76	2.82	4.70	0.47	0.94	Beckman Access
	ng/ml	2.45	1.84	3.06	0.31	0.61	
	ng/dl	245	184	306	30.50	61.00	Beckman Access
	nmol/l	3.30	2.47	4.13	0.42	0.83	Tosoh Series
	ng/ml	2.15	1.61	2.69	0.27	0.54	
	ng/dl	215	161	269	27.00	54.00	Tosoh Series
	nmol/l	5.04	3.78	6.30	0.63	1.26	Vitros ECi
	ng/ml	3.28	2.46	4.10	0.41	0.82	
	ng/dl	328	246	410	41.00	82.00	Vitros ECi
	nmol/l	4.08	3.06	5.10	0.51	1.02	Roche Cobas 4000/E411
	ng/ml	2.66	1.99	3.33	0.34	0.67	
	ng/dl	266	199	333	33.50	67.00	Roche Cobas 4000/E411
	nmol/l	4.12	3.09	5.15	0.52	1.03	Roche Cobas e601/602
	ng/ml	2.68	2.01	3.35	0.34	0.67	
	ng/dl	268	201	335	33.50	67.00	Roche Cobas e601/602
	nmol/l	3.80	2.85	4.75	0.48	0.95	Monobind Inc. ELISA / CLIA
	ng/ml	2.47	1.86	3.08	0.31	0.61	
	ng/dl	247	186	308	30.50	61.00	Monobind Inc. ELISA / CLIA
	nmol/l	4.19	3.15	5.23	0.52	1.04	Roche Cobas e801
	ng/ml	2.73	2.05	3.41	0.34	0.68	
	ng/dl	273	205	341	34.00	68.00	Roche Cobas e801

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	265	199	331	33.00	66.00	Abbott Architect
	µg/dl	20.7	15.5	25.9	2.60	5.20	
	ng/ml	207	155	259	26.00	52.00	Abbott Architect
	nmol/l	256	192	320	32.00	64.00	BioMerieux Vidas
	µg/dl	20.0	15.0	25.0	2.50	5.00	
	ng/ml	200	150	250	25.00	50.00	BioMerieux Vidas
	nmol/l	273	204	342	34.50	69.00	Siemens Centaur XP/XPT/Classic
	µg/dl	21.3	15.9	26.7	2.70	5.40	
	ng/ml	213	159	267	27.00	54.00	Siemens Centaur XP/XPT/Classic
	nmol/l	267	200	334	33.50	67.00	Siemens Immulite 2000/2500
	µg/dl	20.8	15.6	26.0	2.60	5.20	
	ng/ml	208	156	260	26.00	52.00	Siemens Immulite 2000/2500
	nmol/l	283	212	354	35.50	71.00	Siemens Immulite 1000
	µg/dl	22.1	16.5	27.7	2.80	5.60	
	ng/ml	221	165	277	28.00	56.00	Siemens Immulite 1000
	nmol/l	297	223	371	37.00	74.00	Beckman DxI800
	µg/dl	23.2	17.4	29.0	2.90	5.80	
	ng/ml	232	174	290	29.00	58.00	Beckman DxI800
	nmol/l	250	187	313	31.50	63.00	Roche Elecsys
	µg/dl	19.5	14.6	24.4	2.45	4.90	
	ng/ml	195	146	244	24.50	49.00	Roche Elecsys
	nmol/l	305	229	381	38.00	76.00	Beckman Access
	µg/dl	23.8	17.9	29.7	2.95	5.90	
	ng/ml	238	179	297	29.50	59.00	Beckman Access

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	248	186	310	31.00	62.00	Tosoh Series
	µg/dl	19.3	14.5	24.1	2.40	4.80	
	ng/ml	193	145	241	24.00	48.00	Tosoh Series
	nmol/l	277	208	346	34.50	69.00	Vitros ECi
	µg/dl	21.6	16.2	27.0	2.70	5.40	
	ng/ml	216	162	270	27.00	54.00	Vitros ECi
	nmol/l	236	177	295	29.50	59.00	Roche Cobas 4000/E411
	µg/dl	18.4	13.8	23.0	2.30	4.60	
	ng/ml	184	138	230	23.00	46.00	Roche Cobas 4000/E411
	nmol/l	230	172	288	29.00	58.00	Roche Cobas e601/602
	µg/dl	17.9	13.4	22.4	2.25	4.50	
	ng/ml	179	134	224	22.50	45.00	Roche Cobas e601/602
	nmol/l	211	159	263	26.00	52.00	Monobind Inc. ELISA / CLIA
	µg/dl	16.5	12.4	20.6	2.05	4.10	
	ng/ml	165	124	206	20.50	41.00	Monobind Inc. ELISA / CLIA
	nmol/l	242	182	302	30.00	60.00	Roche Cobas e801
	µg/dl	18.9	14.2	23.6	2.35	4.70	
	ng/ml	189	142	236	23.50	47.00	Roche Cobas e801
Transferrin	g/l	1.70	1.36	2.04	0.17	0.34	Immunoturbidimetric
	mg/dl	170	136	204	17.00	34.00	
Triglycerides	mmol/l	2.92	2.46	3.38	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	258	218	298	20.00	40.00	
	mmol/l	2.91	2.45	3.37	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	2.92	2.46	3.38	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	258	218	298	20.00	40.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.89	2.43	3.35	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	256	215	297	20.50	41.00	
	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	258	217	299	20.50	41.00	
	mmol/l	3.42	2.87	3.97	0.28	0.55	Ortho Vitros Microslide Systems
	mg/dl	303	254	352	24.50	49.00	
UIBC	µmol/l	10.8	8.86	12.7	0.97	1.94	TIBC - FE
	µg/dl	60.4	49.5	71.3	5.45	10.90	
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Ortho Vitros Microslide Systems
	mg/dl	115	97.4	133	8.80	17.60	
	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease end point
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.3	17.2	23.4	1.55	3.10	Urease kinetic
	mg/dl	122	103	141	9.50	19.00	
	mmol/l	20.6	17.5	23.7	1.55	3.10	Urease hypochlorite
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	20.3	17.3	23.3	1.50	3.00	BUN
	mg/dl	57.0	48.5	65.5	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.84	7.68	10.0	0.58	1.16	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Reduction methods
	mg/dl	9.53	8.28	10.8	0.63	1.25	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.41	8.18	10.6	0.62	1.23	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.22	8.03	10.4	0.60	1.19	
Vitamin B12	pmol/l	241	193	289	24.00	48.00	Roche Cobas e801
	pg/ml	327	262	392	32.50	65.00	
Zinc	µmol/l	34.2	27.4	41.0	3.40	6.80	Atomic absorption
	µg/dl	223	179	267	22.00	44.00	
	µmol/l	35.6	28.5	42.7	3.55	7.10	Colorimetric with deproteinisation
	µg/dl	232	186	278	23.00	46.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin (electrophoresis)		55.9	50.4	61.4	2.75	5.50	% of total Protein (Beckman Capillary)
alpha-1-globulin		7.9	6.0	9.8	0.95	1.90	% of total Protein (Beckman Capillary)
alpha-2-globulin		11.6	8.8	14.4	1.39	2.78	% of total Protein (Beckman Capillary)
beta-globulin		12.8	9.7	15.9	1.54	3.07	% of total Protein (Beckman Capillary)
gamma-globulin		11.8	9.0	14.6	1.42	2.83	% of total Protein (Beckman Capillary)

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.6	24.3	32.9	2.15	4.30	Ortho Vitros Microslide Systems
	g/dl	2.86	2.43	3.29	0.22	0.43	
Alkaline Phosphatase	U/l	265	225	305	20.00	40.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	152	122	182	15.00	30.00	Ortho Vitros Microslide Systems 37°C
	U/l	151	121	181	15.00	30.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	182	155	209	13.50	27.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	185	148	222	18.50	37.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.4	12.2	18.6	1.60	3.20	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	96.5	76.3	117	10.10	20.20	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	5.65	4.46	6.84	0.60	1.19	
Bilirubin, Unconjugated Vitros BU	µmol/l	86.0	67.9	104	9.05	18.10	BuBc Vitros Slide
	mg/dl	5.03	3.97	6.09	0.53	1.06	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	114	104	124	5.00	10.00	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	274	239	309	17.50	35.00	
Cholinesterase	U/l	4903	3922	5884	490.50	981.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	440	361	519	39.50	79.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	456	365	547	45.50	91.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	5.15	4.12	6.18	0.52	1.03	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	461	369	553	46.00	92.00	Vitros IDMS Traceable
	mg/dl	5.21	4.17	6.25	0.52	1.04	
Free T4	pmol/l	89.4	67.0	112	11.20	22.40	Vitros ECi
	ng/dl	6.97	5.23	8.71	0.87	1.74	
	pg/ml	69.7	52.3	87.1	8.70	17.40	Vitros ECi
gamma-GT	U/l	218	185	251	16.50	33.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.8	12.6	17.0	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	267	227	307	20.00	40.00	
HDL - Cholesterol	mmol/l	2.26	1.92	2.60	0.17	0.34	Vitros Magnetic HDL
	mg/dl	87.2	74.1	100	6.55	13.10	
	mmol/l	2.26	1.92	2.60	0.17	0.34	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	87.2	74.1	100	6.55	13.10	
Iron	µmol/l	33.3	27.3	39.3	3.00	6.00	Ortho Vitros Microslide Systems
	µg/dl	186	153	219	16.50	33.00	
Lactate	mmol/l	5.09	4.18	6.00	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.9	37.7	54.1	4.10	8.20	
LD (LDH)	U/l	417	354	480	31.50	63.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	759	608	910	75.50	151.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.40	2.12	2.68	0.14	0.28	Ortho Vitros Microslide Systems
	mg/dl	1.67	1.47	1.87	0.10	0.20	
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	2.27	1.93	2.61	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Potassium	mmol/l	6.05	5.57	6.53	0.24	0.48	Ortho Vitros Microslide Systems

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Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	46.4	37.1	55.7	4.65	9.30	Ortho Vitros Microslide Systems
	g/dl	4.64	3.71	5.57	0.47	0.93	
PSA Total	ng/ml =	19.4	14.5	24.3	2.45	4.90	Ortho Vitros ECi
Sodium	mmol/l	154	147	161	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.09	0.87	1.31	0.11	0.22	Vitros ECi
TIBC	µmol/l	35.7	28.2	43.2	3.75	7.50	Ortho Vitros Microslide Systems
	µg/dl	200	158	242	21.00	42.00	
Total T3	nmol/l	5.04	3.78	6.30	0.63	1.26	Vitros ECi
	ng/ml	3.28	2.46	4.10	0.41	0.82	
	ng/dl	328	246	410	41.00	82.00	Vitros ECi
Total T4	nmol/l	277	208	346	34.50	69.00	Vitros ECi
	µg/dl	21.6	16.2	27.0	2.70	5.40	
	ng/ml	216	162	270	27.00	54.00	Vitros ECi
Triglycerides	mmol/l	3.42	2.87	3.97	0.28	0.55	Ortho Vitros Microslide Systems
	mg/dl	303	254	352	24.50	49.00	
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Ortho Vitros Microslide Systems
	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	0.53	0.46	0.60	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.84	7.68	10.0	0.58	1.16	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			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	481	409	553	36.00	72.00	Diethanolamine buffer DEA 37°C
	U/l	375	319	431	28.00	56.00	Diethanolamine buffer DEA 30°C
	U/l	307	261	353	23.00	46.00	Diethanolamine buffer DEA 25°C
	U/l	365	310	420	27.50	55.00	AMP optimised to IFCC 37°C
	U/l	284	241	327	21.50	43.00	AMP optimised to IFCC 30°C
	U/l	233	198	268	17.50	35.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
	U/l	111	89	133	11.00	22.00	Tris buffer without P5P 30°C
	U/l	84	68	100	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	94.7	74.8	115	9.95	19.90	Diazo with Dichloroaniline (DCA)
	mg/dl	5.54	4.38	6.70	0.58	1.16	
	µmol/l	109	85.9	132	11.55	23.10	Diazo with Sulphanilic Acid
	mg/dl	6.38	5.03	7.73	0.68	1.35	
	µmol/l	102	80.8	123	10.60	21.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.97	4.73	7.21	0.62	1.24	
	µmol/l	111	88.0	134	11.50	23.00	Oxidation to Biliverdin/Vanadate
	mg/dl	6.49	5.15	7.83	0.67	1.34	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.60	6.61	8.59	0.50	0.99	Cholesterol Oxidase - Abell Kendall
	mg/dl	293	255	331	19.00	38.00	
CK Total	U/l	587	481	693	53.00	106.00	CK-NAC (IFCC) 37°C
	U/l	367	301	433	33.00	66.00	CK-NAC (IFCC) 30°C
	U/l	249	204	294	22.50	45.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	403	322	484	40.50	81.00	Alkaline picrate no deproteinization
	mg/dl	4.55	3.64	5.46	0.46	0.91	
gamma-GT	U/l	169	143	195	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	133	113	153	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	104	88	120	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	190	161	219	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	150	127	173	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	99	135	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	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	2.74	2.33	3.15	0.21	0.41	Direct HDL Immunoseparation
	mg/dl	106	89.9	122	8.05	16.10	
Iron	µmol/l	36.8	30.2	43.4	3.30	6.60	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
LD (LDH)	U/l	759	645	873	57.00	114.00	P->L German methods 37°C
	U/l	548	466	630	41.00	82.00	P->L German methods 30°C
	U/l	385	327	443	29.00	58.00	P->L German methods 25°C

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PRESTIGE 24i

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Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.71	1.51	1.91	0.10	0.20	Xylidyl Blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
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	
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	
Triglycerides	mmol/l	2.97	2.49	3.45	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	263	220	306	21.50	43.00	
	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	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease kinetic
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.46	8.23	10.7	0.62	1.23	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	8.13	10.6	0.61	1.21	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.6	26.0	35.2	2.30	4.60	Bromocresol Green
	g/dl	3.06	2.60	3.52	0.23	0.46	
	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Purple
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	27.8	23.7	31.9	2.05	4.10	Turbidimetric Assays
	g/dl	2.78	2.37	3.19	0.21	0.41	
Alkaline Phosphatase	U/l	305	259	351	23.00	46.00	Roche Integra AMP buffer 37°C
	U/l	238	202	274	18.00	36.00	Roche Integra AMP buffer 30°C
	U/l	195	166	224	14.50	29.00	Roche Integra AMP buffer 25°C
	U/l	302	257	347	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	235	200	270	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 25°C
	U/l	304	259	349	22.50	45.00	Colorimetric 37°C
	U/l	237	202	272	17.50	35.00	Colorimetric 30°C
	U/l	194	166	222	14.00	28.00	Colorimetric 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
Amylase Pancreatic	U/l	259	220	298	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	249	211	287	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	270	230	310	20.00	40.00	Randox Liquid Ethylidene pNPG7 37°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	273	232	314	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	270	229	311	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	273	232	314	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	274	233	315	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	137	110	164	13.50	27.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Colorimetric
	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bile Acids	µmol/l	44.4	35.5	53.3	4.45	8.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	40.9	32.3	49.5	4.30	8.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.39	1.89	2.89	0.25	0.50	
	µmol/l	40.7	32.2	49.2	4.25	8.50	Diazo with Sulphanilic Acid
	mg/dl	2.38	1.88	2.88	0.25	0.50	
	µmol/l	40.9	32.3	49.5	4.30	8.60	Roche DPD JG standardised
	mg/dl	2.39	1.89	2.89	0.25	0.50	
	µmol/l	40.9	32.3	49.5	4.30	8.60	Diazo with Dichloroaniline (DCA)
	mg/dl	2.39	1.89	2.89	0.25	0.50	
	µmol/l	38.4	30.3	46.5	4.05	8.10	Roche DPD Doumas standardised
	mg/dl	2.25	1.77	2.73	0.24	0.48	
Bilirubin Total	µmol/l	89.8	71.0	109	9.40	18.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.25	4.15	6.35	0.55	1.10	
	µmol/l	88.7	70.1	107	9.30	18.60	Diazo with Sulphanilic Acid
	mg/dl	5.19	4.10	6.28	0.55	1.09	
	µmol/l	89.5	70.7	108	9.40	18.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.24	4.14	6.34	0.55	1.10	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	92.1	72.7	112	9.70	19.40	Nitrobenzenediazonium salt
	mg/dl	5.39	4.25	6.53	0.57	1.14	
	µmol/l	88.4	69.8	107	9.30	18.60	Diazonium ion
	mg/dl	5.17	4.08	6.26	0.55	1.09	
Calcium	mmol/l	3.13	2.81	3.45	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.13	2.81	3.45	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	110	102	118	4.00	8.00	ISE indirect
Cholesterol	mmol/l	7.35	6.40	8.30	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	247	321	18.50	37.00	
	mmol/l	7.33	6.38	8.28	0.48	0.95	Cholesterol Oxidase - IDMS
	mg/dl	283	246	320	18.50	37.00	
	mmol/l	7.23	6.29	8.17	0.47	0.94	Cholesterol Dehydrogenase
	mg/dl	279	243	315	18.00	36.00	
Cholinesterase	U/l	5236	4188	6284	524.00	1048.00	Colorimetric Benzoylcholine 37°C
	U/l	5173	4138	6208	517.50	1035.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	523	429	617	47.00	94.00	CK-NAC serum start (DGKC) 37°C
	U/l	327	269	385	29.00	58.00	CK-NAC serum start (DGKC) 30°C
	U/l	222	182	262	20.00	40.00	CK-NAC serum start (DGKC) 25°C
	U/l	522	428	616	47.00	94.00	CK-NAC substrate start (DGKC) 37°C
	U/l	327	268	386	29.50	59.00	CK-NAC substrate start (DGKC) 30°C
	U/l	222	182	262	20.00	40.00	CK-NAC substrate start (DGKC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	527	432	622	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	330	270	390	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 25°C
Copper	µmol/l	23.4	18.7	28.1	2.35	4.70	Colorimetric
	µg/dl	149	119	179	15.00	30.00	
Creatinine	µmol/l	443	354	532	44.50	89.00	Alkaline picrate no deproteinization
	mg/dl	5.01	4.00	6.02	0.51	1.01	
	µmol/l	460	368	552	46.00	92.00	Enzymatic UV method
	mg/dl	5.20	4.16	6.24	0.52	1.04	
	µmol/l	457	366	548	45.50	91.00	Creatinine PAP method
	mg/dl	5.16	4.14	6.18	0.51	1.02	
	µmol/l	457	365	549	46.00	92.00	Roche Creatinine Plus
	mg/dl	5.16	4.12	6.20	0.52	1.04	
	µmol/l	440	352	528	44.00	88.00	Jaffe rate blanked
	mg/dl	4.97	3.98	5.96	0.50	0.99	
	µmol/l	440	352	528	44.00	88.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.97	3.98	5.96	0.50	0.99	
	µmol/l	439	351	527	44.00	88.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.96	3.97	5.95	0.50	0.99	
	µmol/l	451	361	541	45.00	90.00	IDMS traceable
	mg/dl	5.10	4.08	6.12	0.51	1.02	
D-3-Hydroxybutyrate	mmol/l	1.18	1.00	1.36	0.09	0.18	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	91.5	68.6	114	11.45	22.90	Roche Cobas e601/602
	ng/dl	7.14	5.35	8.93	0.90	1.79	
	pg/ml	71.4	53.5	89.3	8.95	17.90	Roche Cobas e601/602

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	170	145	195	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	134	114	154	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	105	89	121	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	185	157	213	14.00	28.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	146	124	168	11.00	22.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	114	97	131	8.50	17.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	190	161	219	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	150	127	173	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	99	135	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose dehydrogenase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	3.01	2.56	3.46	0.23	0.45	Direct HDL Immunoseparation
	mg/dl	116	98.8	133	8.60	17.20	
	mmol/l	2.91	2.47	3.35	0.22	0.44	Direct HDL PEGME
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	2.94	2.50	3.38	0.22	0.44	Direct HDL Roche 4th Generation
	mg/dl	113	96.5	130	8.25	16.50	
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	29.4	42.4	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	164	238	18.50	37.00	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	
LD (LDH)	U/l	389	331	447	29.00	58.00	L->P 37°C
	U/l	281	239	323	21.00	42.00	L->P 30°C
	U/l	197	168	226	14.50	29.00	L->P 25°C
	U/l	400	340	460	30.00	60.00	P->L Scandinavian & Dutch 37°C
	U/l	289	245	333	22.00	44.00	P->L Scandinavian & Dutch 30°C
	U/l	203	172	234	15.50	31.00	P->L Scandinavian & Dutch 25°C
	U/l	393	334	452	29.50	59.00	L->P IFCC 37°C
	U/l	284	241	327	21.50	43.00	L->P IFCC 30°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	71	57	85	7.00	14.00	Other Colorimetric 37°C
	U/l	72	58	86	7.00	14.00	Roche Colorimetric 37°C
	U/l	73	58	88	7.50	15.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.02	1.78	2.26	0.12	0.24	Ion selective electrode
	mg/dl	1.40	1.24	1.56	0.08	0.16	
	mmol/l	2.03	1.78	2.28	0.13	0.25	Spectrophotometric
	mg/dl	1.41	1.24	1.58	0.09	0.17	
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	1.72	1.52	1.92	0.10	0.20	Atomic absorption
	mg/dl	4.18	3.69	4.67	0.25	0.49	
	mmol/l	1.72	1.52	1.92	0.10	0.20	Xylidyl Blue
	mg/dl	4.18	3.69	4.67	0.25	0.49	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Methylthymol blue
	mg/dl	4.08	3.60	4.56	0.24	0.48	
	mmol/l	1.72	1.52	1.92	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.18	3.69	4.67	0.25	0.49	
Osmolality	mOsm/kg	348	278	418	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.32	1.97	2.67	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.19	6.11	8.27	0.54	1.08	
	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Potassium	mmol/l	6.19	5.69	6.69	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.1	35.3	52.9	4.40	8.80	Biuret reaction end point
	g/dl	4.41	3.53	5.29	0.44	0.88	
	g/l	44.1	35.3	52.9	4.40	8.80	Biuret reaction kinetic
	g/dl	4.41	3.53	5.29	0.44	0.88	
PSA Total	ng/ml =	20.1	15.1	25.1	2.50	5.00	Roche Cobas 6000/8000
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.34	1.07	1.61	0.14	0.27	Roche Cobas e601/602
TIBC	µmol/l	38.3	30.3	46.3	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	214	169	259	22.50	45.00	
	µmol/l	39.5	31.2	47.8	4.15	8.30	Direct Colorimetric
	µg/dl	221	174	268	23.50	47.00	
	µmol/l	42.0	33.1	50.9	4.45	8.90	Calculated from Transferrin
	µg/dl	235	185	285	25.00	50.00	
Total T3	nmol/l	4.12	3.09	5.15	0.52	1.03	Roche Cobas e601/602
	ng/ml	2.68	2.01	3.35	0.34	0.67	
	ng/dl	268	201	335	33.50	67.00	Roche Cobas e601/602

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	230	172	288	29.00	58.00	Roche Cobas e601/602
	µg/dl	17.9	13.4	22.4	2.25	4.50	
	ng/ml	179	134	224	22.50	45.00	Roche Cobas e601/602
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	2.93	2.46	3.40	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	259	218	300	20.50	41.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	258	217	299	20.50	41.00	
Urea	mmol/l	20.2	17.2	23.2	1.50	3.00	Urease end point
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.3	17.3	23.3	1.50	3.00	Urease kinetic
	mg/dl	122	104	140	9.00	18.00	
	mmol/l	20.3	17.3	23.3	1.50	3.00	BUN
	mg/dl	57.0	48.5	65.5	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.14	7.96	10.3	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.12	7.93	10.3	0.60	1.19	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.11	7.91	10.3	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.6	26.0	35.2	2.30	4.60	Bromocresol Green
	g/dl	3.06	2.60	3.52	0.23	0.46	
Alkaline Phosphatase	U/l	308	261	355	23.50	47.00	Roche Integra AMP buffer 37°C
	U/l	240	203	277	18.50	37.00	Roche Integra AMP buffer 30°C
	U/l	197	167	227	15.00	30.00	Roche Integra AMP buffer 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
Amylase Total	U/l	281	239	323	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	279	237	321	21.00	42.00	Roche liquid stable pNPG7 37°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	44.9	35.5	54.3	4.70	9.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.63	2.08	3.18	0.28	0.55	
	µmol/l	42.3	33.4	51.2	4.45	8.90	Diazo with Sulphanilic Acid
	mg/dl	2.47	1.95	2.99	0.26	0.52	
	µmol/l	43.5	34.4	52.6	4.55	9.10	Roche DPD JG standardised
	mg/dl	2.54	2.01	3.07	0.27	0.53	
	µmol/l	42.8	33.8	51.8	4.50	9.00	Diazo with Dichloroaniline (DCA)
	mg/dl	2.50	1.98	3.02	0.26	0.52	

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Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	92.9	73.4	112	9.75	19.50	Diazo with Dichloroaniline (DCA)
	mg/dl	5.43	4.29	6.57	0.57	1.14	
	µmol/l	89.3	70.5	108	9.40	18.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.22	4.12	6.32	0.55	1.10	
	µmol/l	92.2	72.9	112	9.65	19.30	Diazonium ion
	mg/dl	5.39	4.26	6.52	0.57	1.13	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.09	2.78	3.40	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	3.14	2.82	3.46	0.16	0.32	NM-BAPTA
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.36	6.40	8.32	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	247	321	18.50	37.00	
	mmol/l	7.38	6.42	8.34	0.48	0.96	Cholesterol Oxidase - IDMS
	mg/dl	285	248	322	18.50	37.00	
CK Total	U/l	521	427	615	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	326	267	385	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	413	330	496	41.50	83.00	Alkaline picrate no deproteinization
	mg/dl	4.67	3.73	5.61	0.47	0.94	
	µmol/l	441	353	529	44.00	88.00	Roche Creatinine Plus
	mg/dl	4.98	3.99	5.97	0.50	0.99	
	µmol/l	412	330	494	41.00	82.00	Jaffe rate blanked
	mg/dl	4.66	3.73	5.59	0.47	0.93	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	434	347	521	43.50	87.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.90	3.92	5.88	0.49	0.98	
	µmol/l	423	339	507	42.00	84.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.78	3.83	5.73	0.48	0.95	
gamma-GT	U/l	175	149	201	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	138	117	159	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	108	92	124	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	182	155	209	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	122	164	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	96	128	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	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	2.92	2.48	3.36	0.22	0.44	Direct HDL PEGME
	mg/dl	113	95.7	130	8.65	17.30	
	mmol/l	3.01	2.56	3.46	0.23	0.45	Direct HDL Roche 4th Generation
	mg/dl	116	98.8	133	8.60	17.20	
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	
LD (LDH)	U/l	388	330	446	29.00	58.00	L->P IFCC 37°C
	U/l	280	238	322	21.00	42.00	L->P IFCC 30°C
	U/l	197	167	227	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	67	53	81	7.00	14.00	Roche Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Xylidyl Blue
	mg/dl	4.11	3.62	4.60	0.25	0.49	
	mmol/l	1.69	1.49	1.89	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.11	3.62	4.60	0.25	0.49	
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.25	6.17	8.33	0.54	1.08	
	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.25	6.17	8.33	0.54	1.08	
Potassium	mmol/l	5.97	5.49	6.45	0.24	0.48	ISE method - indirect
Protein Total	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	
Sodium	mmol/l	154	147	161	3.50	7.00	ISE method - indirect
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	
	mmol/l	2.97	2.50	3.44	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	263	221	305	21.00	42.00	
	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	264	221	307	21.50	43.00	
Urea	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease kinetic
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.27	8.06	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.09	7.90	10.3	0.60	1.19	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	26.0	35.0	2.25	4.50	Bromocresol Green
	g/dl	3.05	2.60	3.50	0.23	0.45	
	g/l	30.8	26.2	35.4	2.30	4.60	Bromocresol Purple
	g/dl	3.08	2.62	3.54	0.23	0.46	
Alkaline Phosphatase	U/l	302	257	347	22.50	45.00	Roche Integra AMP buffer 37°C
	U/l	235	200	270	17.50	35.00	Roche Integra AMP buffer 30°C
	U/l	193	164	222	14.50	29.00	Roche Integra AMP buffer 25°C
	U/l	298	254	342	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	232	198	266	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	190	162	218	14.00	28.00	AMP optimised to IFCC 25°C
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
Amylase Pancreatic	U/l	268	228	308	20.00	40.00	Immunoinhibition EPS substrate 37°C
	U/l	255	217	293	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	285	243	327	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	273	232	314	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	136	109	163	13.50	27.00	Colorimetric 37°C
	U/l	92	74	110	9.00	18.00	Colorimetric 30°C
	U/l	65	52	78	6.50	13.00	Colorimetric 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	138	111	165	13.50	27.00	Tris buffer without P5P 37°C
	U/l	93	75	111	9.00	18.00	Tris buffer without P5P 30°C
	U/l	66	53	79	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	39.9	31.6	48.2	4.15	8.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.33	1.85	2.81	0.24	0.48	
	µmol/l	40.4	32.0	48.8	4.20	8.40	Diazo with Sulphanilic Acid
	mg/dl	2.36	1.87	2.85	0.25	0.49	
	µmol/l	40.2	31.8	48.6	4.20	8.40	Roche DPD JG standardised
	mg/dl	2.35	1.86	2.84	0.25	0.49	
Bilirubin Total	µmol/l	89.4	70.6	108	9.40	18.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.23	4.13	6.33	0.55	1.10	
	µmol/l	88.6	70.0	107	9.30	18.60	Diazo with Sulphanilic Acid
	mg/dl	5.18	4.10	6.26	0.54	1.08	
	µmol/l	89.8	70.9	109	9.45	18.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.25	4.15	6.35	0.55	1.10	
	µmol/l	89.8	70.9	109	9.45	18.90	Diazonium ion
	mg/dl	5.25	4.15	6.35	0.55	1.10	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.13	2.81	3.45	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.13	2.82	3.44	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE indirect

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.30	6.35	8.25	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	282	245	319	18.50	37.00	
	mmol/l	7.37	6.41	8.33	0.48	0.96	Cholesterol Oxidase - IDMS
	mg/dl	284	247	321	18.50	37.00	
	mmol/l	7.24	6.30	8.18	0.47	0.94	Cholesterol Dehydrogenase
	mg/dl	279	243	315	18.00	36.00	
Cholinesterase	U/l	5140	4112	6168	514.00	1028.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	525	431	619	47.00	94.00	CK-NAC substrate start (DGKC) 37°C
	U/l	329	270	388	29.50	59.00	CK-NAC substrate start (DGKC) 30°C
	U/l	223	183	263	20.00	40.00	CK-NAC substrate start (DGKC) 25°C
	U/l	527	432	622	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	330	270	390	30.00	60.00	CK-NAC (IFCC) 30°C
	U/l	224	184	264	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	445	356	534	44.50	89.00	Alkaline picrate no deproteinization
	mg/dl	5.03	4.02	6.04	0.51	1.01	
	µmol/l	452	361	543	45.50	91.00	Roche Creatinine Plus
	mg/dl	5.11	4.08	6.14	0.52	1.03	
	µmol/l	443	354	532	44.50	89.00	Jaffe rate blanked
	mg/dl	5.01	4.00	6.02	0.51	1.01	
	µmol/l	446	357	535	44.50	89.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	5.04	4.03	6.05	0.51	1.01	
	µmol/l	440	352	528	44.00	88.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.97	3.98	5.96	0.50	0.99	
gamma-GT	U/l	172	147	197	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	136	116	156	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	91	121	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	189	161	217	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	149	127	171	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	99	135	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.79	2.37	3.21	0.21	0.42	Direct HDL PEGME
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	2.90	2.46	3.34	0.22	0.44	Direct HDL Roche 4th Generation
	mg/dl	112	95.0	129	8.50	17.00	
Iron	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric with ppt.
	µg/dl	202	165	239	18.50	37.00	
	µmol/l	35.5	29.1	41.9	3.20	6.40	Colorimetric without ppt.
	µg/dl	198	163	233	17.50	35.00	
Lactate	mmol/l	5.31	4.35	6.27	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	47.8	39.2	56.4	4.30	8.60	
LD (LDH)	U/l	394	335	453	29.50	59.00	L->P 37°C
	U/l	284	242	326	21.00	42.00	L->P 30°C
	U/l	200	170	230	15.00	30.00	L->P 25°C
	U/l	393	334	452	29.50	59.00	L->P IFCC 37°C
	U/l	284	241	327	21.50	43.00	L->P IFCC 30°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	70	56	84	7.00	14.00	Roche Turbidimetric with colipase 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	71	57	85	7.00	14.00	
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Atomic absorption
	mg/dl	4.16	3.65	4.67	0.26	0.51	
	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	
	mmol/l	1.72	1.52	1.92	0.10	0.20	Methylthymol blue
	mg/dl	4.18	3.69	4.67	0.25	0.49	
	mmol/l	1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
Osmolality	mOsm/kg	349	279	419	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.13	6.05	8.21	0.54	1.08	
	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Potassium	mmol/l	6.17	5.68	6.66	0.25	0.49	ISE method - indirect
Protein Total	g/l	44.1	35.2	53.0	4.45	8.90	Biuret reaction end point
	g/dl	4.41	3.52	5.30	0.45	0.89	
	g/l	43.8	35.0	52.6	4.40	8.80	Biuret reaction kinetic
	g/dl	4.38	3.50	5.26	0.44	0.88	
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	39.0	30.8	47.2	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	218	172	264	23.00	46.00	
	µmol/l	39.5	31.2	47.8	4.15	8.30	Direct Colorimetric
	µg/dl	221	174	268	23.50	47.00	
Triglycerides	mmol/l	2.93	2.47	3.39	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	259	219	299	20.00	40.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	264	221	307	21.50	43.00	
	mmol/l	2.90	2.44	3.36	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	257	216	298	20.50	41.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	20.3	17.3	23.3	1.50	3.00	Urease end point
	mg/dl	122	104	140	9.00	18.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	Urease kinetic
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	20.4	17.3	23.5	1.55	3.10	BUN
	mg/dl	57.3	48.7	65.9	4.30	8.60	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.29	8.08	10.5	0.61	1.21	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.7	26.1	35.3	2.30	4.60	Bromocresol Green
	g/dl	3.07	2.61	3.53	0.23	0.46	
	g/l	26.8	22.7	30.9	2.05	4.10	Bromocresol Purple
	g/dl	2.68	2.27	3.09	0.21	0.41	
	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	299	254	344	22.50	45.00	Roche Integra AMP buffer 37°C
	U/l	233	198	268	17.50	35.00	Roche Integra AMP buffer 30°C
	U/l	191	162	220	14.50	29.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	138	110	166	14.00	28.00	Tris buffer without P5P 37°C
	U/l	102	81	123	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
Amylase Pancreatic	U/l	258	219	297	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	250	213	287	18.50	37.00	Roche EPS Liquid 37°C
Amylase Total	U/l	274	233	315	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	41.8	33.0	50.6	4.40	8.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.45	1.93	2.97	0.26	0.52	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	41.8	33.0	50.6	4.40	8.80	Roche DPD JG standardised
	mg/dl	2.45	1.93	2.97	0.26	0.52	
	µmol/l	35.3	27.9	42.7	3.70	7.40	Roche DPD Doumas standardised
	mg/dl	2.07	1.63	2.51	0.22	0.44	
Bilirubin Total	µmol/l	89.9	71.0	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.26	4.15	6.37	0.56	1.11	
	µmol/l	89.8	70.9	109	9.45	18.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.25	4.15	6.35	0.55	1.10	
	µmol/l	89.3	70.6	108	9.35	18.70	Diazonium ion
	mg/dl	5.22	4.13	6.31	0.55	1.09	
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.2	13.8	0.65	1.30	
	mmol/l	3.12	2.81	3.43	0.16	0.31	NM-BAPTA
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.42	6.46	8.38	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	mg/dl	286	249	323	18.50	37.00	
	mmol/l	7.43	6.47	8.39	0.48	0.96	Cholesterol Oxidase - IDMS
	mg/dl	287	250	324	18.50	37.00	
Cholinesterase	U/l	5043	4034	6052	504.50	1009.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	512	420	604	46.00	92.00	CK-NAC substrate start (DGKC) 37°C
	U/l	321	263	379	29.00	58.00	CK-NAC substrate start (DGKC) 30°C
	U/l	218	179	257	19.50	39.00	CK-NAC substrate start (DGKC) 25°C
	U/l	520	426	614	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	326	267	385	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 25°C

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	456	365	547	45.50	91.00	Roche Creatinine Plus
	mg/dl	5.15	4.12	6.18	0.52	1.03	
	µmol/l	444	355	533	44.50	89.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	5.02	4.01	6.03	0.51	1.01	
	µmol/l	452	361	543	45.50	91.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	5.11	4.08	6.14	0.52	1.03	
	µmol/l	436	349	523	43.50	87.00	IDMS traceable
	mg/dl	4.93	3.94	5.92	0.50	0.99	
gamma-GT	U/l	175	148	202	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	138	117	159	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	108	91	125	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	97	133	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	2.90	2.47	3.33	0.22	0.43	Direct HDL Roche 4th Generation
	mg/dl	112	95.3	129	8.35	16.70	
Iron	µmol/l	34.5	28.3	40.7	3.10	6.20	Colorimetric without ppt.
	µg/dl	193	158	228	17.50	35.00	
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	395	336	454	29.50	59.00	L->P IFCC 37°C
	U/l	285	243	327	21.00	42.00	L->P IFCC 30°C
	U/l	200	170	230	15.00	30.00	L->P IFCC 25°C

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	74	60	88	7.00	14.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.97	1.73	2.21	0.12	0.24	Spectrophotometric
	mg/dl	1.37	1.20	1.54	0.09	0.17	
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	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Osmolality	mOsm/kg	349	279	419	35.00	70.00	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	6.17	5.68	6.66	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.9	35.2	52.6	4.35	8.70	Biuret reaction end point
	g/dl	4.39	3.52	5.26	0.44	0.87	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	38.3	30.3	46.3	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	214	169	259	22.50	45.00	
Triglycerides	mmol/l	2.96	2.49	3.43	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	262	220	304	21.00	42.00	
	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	2.98	2.51	3.45	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	264	222	306	21.00	42.00	
	mmol/l	2.91	2.45	3.37	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	258	217	299	20.50	41.00	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	20.2	17.1	23.3	1.55	3.10	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.2	17.2	23.2	1.50	3.00	BUN
	mg/dl	56.7	48.2	65.2	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.07	7.90	10.2	0.59	1.17	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.09	7.91	10.3	0.59	1.18	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			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	504	428	580	38.00	76.00	Diethanolamine buffer DEA 37°C
	U/l	351	298	404	26.50	53.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	290	247	333	21.50	43.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	312	265	359	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	39.7	31.3	48.1	4.20	8.40	Diazo with Sulphanilic Acid
	mg/dl	2.32	1.83	2.81	0.25	0.49	
	µmol/l	38.4	30.3	46.5	4.05	8.10	Oxidation to Biliverdin/Vanadate
	mg/dl	2.25	1.77	2.73	0.24	0.48	
Bilirubin Total	µmol/l	103	81.3	125	10.85	21.70	Diazo with Sulphanilic Acid
	mg/dl	6.03	4.76	7.30	0.64	1.27	
	µmol/l	106	83.9	128	11.05	22.10	Oxidation to Biliverdin/Vanadate
	mg/dl	6.20	4.91	7.49	0.65	1.29	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	110	101	119	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.90	6.87	8.93	0.52	1.03	Cholesterol Oxidase - Abell Kendall
	mg/dl	305	265	345	20.00	40.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	608	499	717	54.50	109.00	CK-NAC substrate start (DGKC) 37°C
	U/l	621	509	733	56.00	112.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	387	310	464	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.37	3.50	5.24	0.44	0.87	
	µmol/l	464	371	557	46.50	93.00	Enzymatic UV method
	mg/dl	5.24	4.19	6.29	0.53	1.05	
gamma-GT	U/l	205	174	236	15.50	31.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.0	12.8	17.2	1.10	2.20	Hexokinase
	mg/dl	270	231	309	19.50	39.00	
	mmol/l	16.2	13.8	18.6	1.20	2.40	Glucose oxidase
	mg/dl	292	249	335	21.50	43.00	
Iron	µmol/l	36.8	30.2	43.4	3.30	6.60	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
Lactate	mmol/l	5.33	4.37	6.29	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	48.0	39.4	56.6	4.30	8.60	
LD (LDH)	U/l	812	690	934	61.00	122.00	P->L German methods 37°C
	U/l	385	327	443	29.00	58.00	L->P IFCC 37°C
Lipase	U/l	90	72	108	9.00	18.00	Randox Colorimetric 37°C
Magnesium	mmol/l	1.72	1.52	1.92	0.10	0.20	Xylidyl Blue
	mg/dl	4.18	3.69	4.67	0.25	0.49	
Phosphate Inorganic	mmol/l	2.32	1.97	2.67	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.19	6.11	8.27	0.54	1.08	
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	Enzymatic
	mmol/l	6.04	5.56	6.52	0.24	0.48	ISE method - direct

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			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	
Sodium	mmol/l	157	149	165	4.00	8.00	Enzymatic
	mmol/l	156	148	164	4.00	8.00	ISE method - direct
TIBC	µmol/l	46.5	36.7	56.3	4.90	9.80	Direct Colorimetric
	µg/dl	260	205	315	27.50	55.00	
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
Urea	mmol/l	20.6	17.5	23.7	1.55	3.10	Urease kinetic
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	20.6	17.5	23.7	1.55	3.10	BUN
	mg/dl	57.8	49.1	66.5	4.35	8.70	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.63	8.38	10.9	0.63	1.25	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.51	8.28	10.7	0.62	1.23	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Green
	g/dl	2.94	2.50	3.38	0.22	0.44	
	g/l	27.0	23.0	31.0	2.00	4.00	Bromocresol Purple
	g/dl	2.70	2.30	3.10	0.20	0.40	
Alkaline Phosphatase	U/l	305	260	350	22.50	45.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	272	231	313	20.50	41.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	290	247	333	21.50	43.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	153	123	183	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bile Acids	µmol/l	43.1	34.5	51.7	4.30	8.60	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	38.3	30.2	46.4	4.05	8.10	Oxidation to Biliverdin/Vanadate
	mg/dl	2.24	1.77	2.71	0.24	0.47	
Bilirubin Total	µmol/l	110	86.6	133	11.70	23.40	Diazo with Sulphanilic Acid
	mg/dl	6.44	5.07	7.81	0.69	1.37	
	µmol/l	112	88.4	136	11.80	23.60	Oxidation to Biliverdin/Vanadate
	mg/dl	6.55	5.17	7.93	0.69	1.38	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	3.10	2.79	3.41	0.16	0.31	Arsenazo III
	mg/dl	12.4	11.2	13.6	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.55	6.56	8.54	0.50	0.99	Cholesterol Oxidase - Abell Kendall
	mg/dl	291	253	329	19.00	38.00	
	mmol/l	7.73	6.73	8.73	0.50	1.00	Cholesterol Oxidase - IDMS
	mg/dl	298	260	336	19.00	38.00	
CK Total	U/l	569	467	671	51.00	102.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	418	334	502	42.00	84.00	Alkaline picrate no deproteinization
	mg/dl	4.72	3.77	5.67	0.48	0.95	
	µmol/l	442	353	531	44.50	89.00	Enzymatic UV method
	mg/dl	4.99	3.99	5.99	0.50	1.00	
	µmol/l	448	358	538	45.00	90.00	Creatinine PAP method
	mg/dl	5.06	4.05	6.07	0.51	1.01	
	µmol/l	440	352	528	44.00	88.00	Jaffe rate blanked
	mg/dl	4.97	3.98	5.96	0.50	0.99	
	µmol/l	434	347	521	43.50	87.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.90	3.92	5.88	0.49	0.98	
	µmol/l	436	348	524	44.00	88.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.93	3.93	5.93	0.50	1.00	
gamma-GT	U/l	171	146	196	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	172	146	198	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	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	2.27	1.93	2.61	0.17	0.34	Direct HDL Immunoseparation
	mg/dl	87.6	74.5	101	6.55	13.10	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.26	1.92	2.60	0.17	0.34	Direct Clearance Method
	mg/dl	87.2	74.1	100	6.55	13.10	
Iron	µmol/l	36.2	29.7	42.7	3.25	6.50	Colorimetric with ppt.
	µg/dl	202	166	238	18.00	36.00	
	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	5.15	4.22	6.08	0.47	0.93	Colorimetric Lactate Oxidase
	mg/dl	46.4	38.0	54.8	4.20	8.40	
LD (LDH)	U/l	377	321	433	28.00	56.00	L->P 37°C
	U/l	763	648	878	57.50	115.00	P->L German methods 37°C
	U/l	383	326	440	28.50	57.00	L->P IFCC 37°C
Lipase	U/l	83	67	99	8.00	16.00	Other 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	1.69	1.49	1.89	0.10	0.20	Xylidyl Blue
	mg/dl	4.11	3.62	4.60	0.25	0.49	
Phosphate Inorganic	mmol/l	2.38	2.03	2.73	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.38	6.29	8.47	0.55	1.09	
Potassium	mmol/l	6.21	5.71	6.71	0.25	0.50	ISE method - indirect
Protein Total	g/l	43.9	35.1	52.7	4.40	8.80	Biuret reaction end point
	g/dl	4.39	3.51	5.27	0.44	0.88	
	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	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	45.1	35.6	54.6	4.75	9.50	FE+UIBC(saturation with iron)
	µg/dl	252	199	305	26.50	53.00	
	µmol/l	46.5	36.7	56.3	4.90	9.80	Direct Colorimetric
	µg/dl	260	205	315	27.50	55.00	
Triglycerides	mmol/l	3.02	2.53	3.51	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	267	224	310	21.50	43.00	
	mmol/l	3.07	2.58	3.56	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	272	228	316	22.00	44.00	
Urea	mmol/l	21.0	17.9	24.1	1.55	3.10	Urease end point
	mg/dl	126	108	144	9.00	18.00	
	mmol/l	20.9	17.8	24.0	1.55	3.10	Urease kinetic
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	20.9	17.8	24.0	1.55	3.10	BUN
	mg/dl	58.7	49.9	67.5	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.59	8.33	10.9	0.63	1.26	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.53	8.30	10.8	0.61	1.23	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.22	8.01	10.4	0.61	1.21	

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Green
	g/dl	2.92	2.48	3.36	0.22	0.44	
	g/l	28.0	23.8	32.2	2.10	4.20	Bromocresol Purple
	g/dl	2.80	2.38	3.22	0.21	0.42	
Alkaline Phosphatase	U/l	313	266	360	23.50	47.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	162	130	194	16.00	32.00	Colorimetric 37°C
	U/l	161	129	193	16.00	32.00	Tris buffer without P5P 37°C
	U/l	162	130	194	16.00	32.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	276	235	317	20.50	41.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	304	259	349	22.50	45.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	156	124	188	16.00	32.00	Tris buffer without P5P 37°C
	U/l	157	126	188	15.50	31.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	40.6	32.1	49.1	4.25	8.50	Oxidation to Biliverdin/Vanadate
	mg/dl	2.38	1.88	2.88	0.25	0.50	
Bilirubin Total	µmol/l	112	88.2	136	11.90	23.80	Oxidation to Biliverdin/Vanadate
	mg/dl	6.55	5.16	7.94	0.70	1.39	
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	3.16	2.84	3.48	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.4	14.0	0.65	1.30	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.54	6.56	8.52	0.49	0.98	Cholesterol Oxidase - Abell Kendall
	mg/dl	291	253	329	19.00	38.00	
	mmol/l	7.59	6.60	8.58	0.50	0.99	Cholesterol Oxidase - IDMS
	mg/dl	293	255	331	19.00	38.00	
Cholinesterase	U/l	6347	5078	7616	634.50	1269.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	548	449	647	49.50	99.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	441	353	529	44.00	88.00	Alkaline picrate no deproteinization
	mg/dl	4.98	3.99	5.97	0.50	0.99	
	µmol/l	454	363	545	45.50	91.00	Enzymatic UV method
	mg/dl	5.13	4.10	6.16	0.52	1.03	
	µmol/l	442	354	530	44.00	88.00	Creatinine PAP method
	mg/dl	4.99	4.00	5.98	0.50	0.99	
	µmol/l	444	355	533	44.50	89.00	Jaffe rate blanked
	mg/dl	5.02	4.01	6.03	0.51	1.01	
	µmol/l	438	351	525	43.50	87.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.95	3.97	5.93	0.49	0.98	
gamma-GT	U/l	171	146	196	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	168	143	193	12.50	25.00	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	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.47	2.10	2.84	0.19	0.37	Direct HDL PPD
	mg/dl	95.3	81.1	110	7.10	14.20	

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.31	1.96	2.66	0.18	0.35	Direct HDL Immunoseparation
	mg/dl	89.2	75.7	103	6.75	13.50	
	mmol/l	2.42	2.06	2.78	0.18	0.36	Direct Clearance Method
	mg/dl	93.4	79.5	107	6.95	13.90	
Iron	µmol/l	36.9	30.2	43.6	3.35	6.70	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	5.49	4.51	6.47	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.5	40.6	58.4	4.45	8.90	
LD (LDH)	U/l	381	324	438	28.50	57.00	L->P 37°C
	U/l	376	320	432	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	78	63	93	7.50	15.00	Other Colorimetric 37°C
Lithium	mmol/l	1.97	1.73	2.21	0.12	0.24	Spectrophotometric
	mg/dl	1.37	1.20	1.54	0.09	0.17	
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Xylidyl Blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
Osmolality	mOsm/kg	347	278	416	34.50	69.00	Calculated
Phosphate Inorganic	mmol/l	2.40	2.04	2.76	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.44	6.32	8.56	0.56	1.12	
Potassium	mmol/l	5.98	5.50	6.46	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.1	35.2	53.0	4.45	8.90	Biuret reaction end point
	g/dl	4.41	3.52	5.30	0.45	0.89	
Sodium	mmol/l	156	149	163	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.07	0.86	1.28	0.11	0.21	Siemens Atellica IM

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	47.9	37.8	58.0	5.05	10.10	Direct Colorimetric
	µg/dl	268	211	325	28.50	57.00	
Triglycerides	mmol/l	3.13	2.63	3.63	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	277	233	321	22.00	44.00	
	mmol/l	3.13	2.63	3.63	0.25	0.50	L/G Kinase EP. no correction
	mg/dl	277	233	321	22.00	44.00	
Urea	mmol/l	20.8	17.7	23.9	1.55	3.10	Urease end point
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	21.0	17.8	24.2	1.60	3.20	Urease kinetic
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	21.2	18.0	24.4	1.60	3.20	Urease hypochlorite
	mg/dl	127	108	146	9.50	19.00	
	mmol/l	21.0	17.9	24.1	1.55	3.10	BUN
	mg/dl	58.9	50.1	67.7	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.53	8.28	10.8	0.63	1.25	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.51	8.28	10.7	0.62	1.23	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.42	8.20	10.6	0.61	1.22	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
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	27.6	23.5	31.7	2.05	4.10	Bromocresol Purple
	g/dl	2.76	2.35	3.17	0.21	0.41	
Alkaline Phosphatase	U/l	309	262	356	23.50	47.00	Siemens Dimension AMP buffer 37°C
	U/l	313	266	360	23.50	47.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	158	126	190	16.00	32.00	Tris buffer with P5P 37°C
	U/l	156	124	188	16.00	32.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	334	284	384	25.00	50.00	Siemens - maltopenta/hexaoside 37°C
	U/l	335	285	385	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	179	143	215	18.00	36.00	Tris buffer with P5P 37°C
	U/l	180	144	216	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Bilirubin Total	µmol/l	96.7	76.4	117	10.15	20.30	Diazo with Sulphanilic Acid
	mg/dl	5.66	4.47	6.85	0.60	1.19	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.1	13.7	0.65	1.30	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.08	6.16	8.00	0.46	0.92	Cholesterol Oxidase - Abell Kendall
	mg/dl	273	238	308	17.50	35.00	
	mmol/l	7.11	6.19	8.03	0.46	0.92	Dimension-Siemens reagents
	mg/dl	274	239	309	17.50	35.00	
Cholinesterase	U/l	9001	7201	10801	900.00	1800.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	522	428	616	47.00	94.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	472	378	566	47.00	94.00	Alkaline picrate with deproteinization
	mg/dl	5.33	4.27	6.39	0.53	1.06	
	µmol/l	454	363	545	45.50	91.00	Alkaline picrate no deproteinization
	mg/dl	5.13	4.10	6.16	0.52	1.03	
	µmol/l	453	363	543	45.00	90.00	Enzymatic UV method
	mg/dl	5.12	4.10	6.14	0.51	1.02	
	µmol/l	454	363	545	45.50	91.00	Creatinine PAP method
	mg/dl	5.13	4.10	6.16	0.52	1.03	
	µmol/l	454	363	545	45.50	91.00	Jaffe rate blanked
	mg/dl	5.13	4.10	6.16	0.52	1.03	
	µmol/l	457	366	548	45.50	91.00	IDMS traceable
	mg/dl	5.16	4.14	6.18	0.51	1.02	
Free T4	pmol/l	111	83.2	139	13.90	27.80	Siemens Dimension Exl LOCI
	ng/dl	8.66	6.49	10.8	1.09	2.17	
	pg/ml	86.6	64.9	108	10.85	21.70	Siemens Dimension Exl LOCI
gamma-GT	U/l	194	165	223	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	222	189	255	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Oxygen electrode
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	2.84	2.41	3.27	0.22	0.43	Direct HDL PPD
	mg/dl	110	93.0	127	8.50	17.00	
	mmol/l	2.81	2.39	3.23	0.21	0.42	Direct HDL PEGME
	mg/dl	108	92.3	124	7.85	15.70	
Iron	µmol/l	34.2	28.0	40.4	3.10	6.20	Colorimetric with ppt.
	µg/dl	191	157	225	17.00	34.00	
	µmol/l	34.1	28.0	40.2	3.05	6.10	Colorimetric without ppt.
	µg/dl	191	157	225	17.00	34.00	
Lactate	mmol/l	5.62	4.60	6.64	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	50.6	41.4	59.8	4.60	9.20	
	mmol/l	5.51	4.52	6.50	0.50	0.99	UV LDH
	mg/dl	49.6	40.7	58.5	4.45	8.90	
LD (LDH)	U/l	376	320	432	28.00	56.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	377	321	433	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	84	67	101	8.50	17.00	Other Colorimetric 37°C
	U/l	265	212	318	26.50	53.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Methylthymol blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Osmolality	mOsm/kg	340	272	408	34.00	68.00	Calculated
Phosphate Inorganic	mmol/l	2.31	1.96	2.66	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.16	6.08	8.24	0.54	1.08	
	mmol/l	2.33	1.98	2.68	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.22	6.14	8.30	0.54	1.08	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	6.20	5.70	6.70	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.1	36.9	55.3	4.60	9.20	Biuret reaction end point
	g/dl	4.61	3.69	5.53	0.46	0.92	
PSA Total	ng/ml =	19.1	14.4	23.8	2.35	4.70	Siemens Dimension
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - indirect
TIBC	µmol/l	35.6	28.1	43.1	3.75	7.50	Removal of excess free iron
	µg/dl	199	157	241	21.00	42.00	
	µmol/l	35.3	27.9	42.7	3.70	7.40	FE+UIBC(saturation with iron)
	µg/dl	197	156	238	20.50	41.00	
	µmol/l	34.9	27.6	42.2	3.65	7.30	Direct Colorimetric
	µg/dl	195	154	236	20.50	41.00	
Triglycerides	mmol/l	2.95	2.48	3.42	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.95	2.48	3.42	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	261	219	303	21.00	42.00	
	mmol/l	2.94	2.47	3.41	0.24	0.47	Lipase/Glycerol Dehydrogenase
	mg/dl	260	219	301	20.50	41.00	
Urea	mmol/l	20.8	17.6	24.0	1.60	3.20	Urease end point
	mg/dl	125	106	144	9.50	19.00	
	mmol/l	21.0	17.8	24.2	1.60	3.20	Urease kinetic
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	21.0	17.9	24.1	1.55	3.10	BUN
	mg/dl	58.9	50.1	67.7	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.39	8.16	10.6	0.62	1.23	

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RANDOX

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.39	8.16	10.6	0.62	1.23	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.32	8.11	10.5	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.32	8.11	10.5	0.61	1.21	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.0	23.8	32.2	2.10	4.20	Bromocresol Green
	g/dl	2.80	2.38	3.22	0.21	0.42	
	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	305	259	351	23.00	46.00	Siemens Dimension AMP buffer 37°C
	U/l	307	261	353	23.00	46.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	157	126	188	15.50	31.00	Tris buffer with P5P 37°C
	U/l	158	127	189	15.50	31.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	335	285	385	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	181	145	217	18.00	36.00	Tris buffer with P5P 37°C
	U/l	181	145	217	18.00	36.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	26.9	21.3	32.5	2.80	5.60	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.57	1.25	1.89	0.16	0.32	
Bilirubin Total	µmol/l	96.5	76.2	117	10.15	20.30	Diazo with Sulphanilic Acid
	mg/dl	5.65	4.46	6.84	0.60	1.19	
Calcium	mmol/l	3.08	2.77	3.39	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.13	2.82	3.44	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	114	104	124	5.00	10.00	ISE indirect

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	7.04	6.13	7.95	0.46	0.91	Cholesterol Oxidase - Abell Kendall
	mg/dl	272	237	307	17.50	35.00	
	mmol/l	7.07	6.15	7.99	0.46	0.92	Dimension-Siemens reagents
	mg/dl	273	237	309	18.00	36.00	
Cholinesterase	U/l	9034	7227	10841	903.50	1807.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	526	431	621	47.50	95.00	CK-NAC (IFCC) 37°C
	U/l	530	435	625	47.50	95.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	451	361	541	45.00	90.00	Alkaline picrate no deproteinization
	mg/dl	5.10	4.08	6.12	0.51	1.02	
	µmol/l	456	365	547	45.50	91.00	Enzymatic UV method
	mg/dl	5.15	4.12	6.18	0.52	1.03	
	µmol/l	452	361	543	45.50	91.00	Creatinine PAP method
	mg/dl	5.11	4.08	6.14	0.52	1.03	
	µmol/l	454	363	545	45.50	91.00	Jaffe rate blanked
	mg/dl	5.13	4.10	6.16	0.52	1.03	
	µmol/l	466	373	559	46.50	93.00	IDMS traceable
	mg/dl	5.27	4.21	6.33	0.53	1.06	
gamma-GT	U/l	198	168	228	15.00	30.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	220	187	253	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Glucose dehydrogenase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.85	2.42	3.28	0.22	0.43	Direct HDL PPD
	mg/dl	110	93.4	127	8.30	16.60	
	mmol/l	2.81	2.39	3.23	0.21	0.42	Direct HDL PEGME
	mg/dl	108	92.3	124	7.85	15.70	
	mmol/l	2.75	2.34	3.16	0.21	0.41	Direct Clearance Method
	mg/dl	106	90.3	122	7.85	15.70	
Iron	µmol/l	34.1	28.0	40.2	3.05	6.10	Colorimetric with ppt.
	µg/dl	191	157	225	17.00	34.00	
	µmol/l	34.2	28.1	40.3	3.05	6.10	Colorimetric without ppt.
	µg/dl	191	157	225	17.00	34.00	
Lactate	mmol/l	5.59	4.58	6.60	0.51	1.01	UV LDH
	mg/dl	50.4	41.3	59.5	4.55	9.10	
LD (LDH)	U/l	374	318	430	28.00	56.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	376	320	432	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	269	216	322	26.50	53.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	2.29	2.02	2.56	0.14	0.27	Spectrophotometric
	mg/dl	1.59	1.40	1.78	0.10	0.19	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Methylthymol blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.25	6.17	8.33	0.54	1.08	
	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	
Potassium	mmol/l	6.13	5.64	6.62	0.25	0.49	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	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	157	149	165	4.00	8.00	ISE method - indirect
TIBC	µmol/l	34.9	27.5	42.3	3.70	7.40	Removal of excess free iron
	µg/dl	195	154	236	20.50	41.00	
	µmol/l	35.5	28.0	43.0	3.75	7.50	FE+UIBC(saturation with iron)
	µg/dl	198	157	239	20.50	41.00	
	µmol/l	35.1	27.7	42.5	3.70	7.40	Direct Colorimetric
	µg/dl	196	155	237	20.50	41.00	
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	
	mmol/l	2.88	2.42	3.34	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.89	2.43	3.35	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	256	215	297	20.50	41.00	
Urea	mmol/l	20.9	17.7	24.1	1.60	3.20	Urease end point
	mg/dl	126	106	146	10.00	20.00	
	mmol/l	21.0	17.8	24.2	1.60	3.20	Urease kinetic
	mg/dl	126	107	145	9.50	19.00	
	mmol/l	21.0	17.9	24.1	1.55	3.10	BUN
	mg/dl	58.9	50.1	67.7	4.40	8.80	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.36	8.15	10.6	0.61	1.21	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.41	8.18	10.6	0.62	1.23	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.27	8.06	10.5	0.61	1.21	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	28.1	23.8	32.4	2.15	4.30	Bromocresol Purple
	g/dl	2.81	2.38	3.24	0.22	0.43	
Alkaline Phosphatase	U/l	309	263	355	23.00	46.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	151	121	181	15.00	30.00	Tris buffer with P5P 37°C
Amylase Total	U/l	330	280	380	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	184	148	220	18.00	36.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	28.8	22.7	34.9	3.05	6.10	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Bilirubin Total	µmol/l	96.3	76.1	117	10.10	20.20	Diazo with Sulphanilic Acid
	mg/dl	5.63	4.45	6.81	0.59	1.18	
Calcium	mmol/l	3.14	2.82	3.46	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.19	6.25	8.13	0.47	0.94	Cholesterol Oxidase - Abell Kendall
	mg/dl	278	241	315	18.50	37.00	
CK Total	U/l	508	416	600	46.00	92.00	CK-NAC (IFCC) 37°C
gamma-GT	U/l	217	184	250	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.1	12.9	17.3	1.10	2.20	Hexokinase
	mg/dl	272	232	312	20.00	40.00	
HDL - Cholesterol	mmol/l	2.66	2.26	3.06	0.20	0.40	Direct HDL PEGME
	mg/dl	103	87.2	119	7.90	15.80	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1224UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-04-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	34.7	28.4	41.0	3.15	6.30	Colorimetric without ppt.
	µg/dl	194	159	229	17.50	35.00	
LD (LDH)	U/l	375	319	431	28.00	56.00	L->P IFCC 37°C
Magnesium	mmol/l	1.89	1.66	2.12	0.12	0.23	Methylthymol blue
	mg/dl	4.59	4.03	5.15	0.28	0.56	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.04	5.98	8.10	0.53	1.06	
Potassium	mmol/l	6.06	5.58	6.54	0.24	0.48	ISE method - indirect
Protein Total	g/l	46.5	37.2	55.8	4.65	9.30	Biuret reaction end point
	g/dl	4.65	3.72	5.58	0.47	0.93	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.11	2.61	3.61	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	275	231	319	22.00	44.00	
Urea	mmol/l	20.6	17.5	23.7	1.55	3.10	Urease kinetic
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	20.6	17.5	23.7	1.55	3.10	BUN
	mg/dl	57.8	49.1	66.5	4.35	8.70	

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