

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. 1003UE	EXPIRY: 2022-02-28	

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 3 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.

NEFA is stable for 1 day at +2°C to +8°C.

Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at -18°C to -24°C.

Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.

Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.

The control should not be used as a calibration material.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

- 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.
- Refer to the Control section of the individual analyser application.
- Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

MATERIALS PROVIDED

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

MATERIALS REQUIRED BUT NOT PROVIDED

Volumetric pipette

ASSIGNED VALUES

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

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

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

NOTES

® All trademarks recognised.

- (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.

04 Jan '19 ne

质控血清说明书

【产品名称】

通用名称：质控血清

英文名称：Assayed Human Multi-sera

【包装规格】

HE1532（货号）：20 × 5mL。

【预期用途】

该产品用于在多种型号的全自动生化分析仪上对临床化学分析项目进行准确性的评价。

【检验原理】

质控血清分为两个水平，水平 2 和水平 3。我们为所列分析物提供两个水平范围的靶值和参考范围。该产品为水平 3

【主要组成成分】

试剂成分：人血清基质

【储存条件及有效期】

1. 储存条件

2~8°C 储存，有效期 4 年。

试剂的稳定性

开封：冷藏储存（2~8°C）。复溶血清 25°C 稳定 8 小时，4°C 稳定 7 天，-20°C 冷冻时至少稳定 1 个月（见局限性）。

未开封：冷藏储存（2~8°C）。每个独立试剂瓶都可稳定保存到有效期。

2. 生产日期：见标签

3. 使用期限：见标签

【适用仪器】

ABBOTT AEROSSET[®]、Bayer ADVIA 1650[®]、Abbott Architect c8000/ci8200[®]、BAYER RA500/1000/2000/XT/OPERA[®]、Bayer/Ciba 550 Express[®]、COBAS INTEGRA[®]、COBAS MIRA[®]、DADE DIMENSION[®]、FALCOR 300 Series、HITACHI SERIES[®]、JOHNSON AND JOHNSON VITROS[®]、Konelab 20/30/60[®]、OLYMPUS AU400/500/600/800[®]、RX DAYTONA[®]、SYNCHRON CX4/5/7/9/LX20、VITALAB SELECTRA[®]全自动生化分析仪。

Bayer ACS 3rd Generation、Bayer/Technicon RA50[®]、iLab 300[®]、iLab 600[®]、VitalabFlexor[®]全自动生化分析仪。

【检验方法】

质控血清处于冻干状态。

1、在 20~25°C，使用 5ml 蒸馏水将每瓶冻干血清复溶。密封使用前静置 30 分钟。轻微搅动使内容物完全溶解。避免形成泡沫。不可摇动。

2、参考独立分析仪实际应用的质控范围。

3、冷冻任一未使用的原料。重新使用前，将内容物完全混合。

所需未提供的产品

容量吸管

赋值

提交给参考实验室的每批实验用人体血清根据国际参考标准进行赋值。如果国际参考标准不可用，那么要使用参考方法。数值收集来源于世界范围内大约 3000 个实验室，使用特定的统计分析来赋值。

我们为每个参数使用的不同方法提供每个批次的质控范围。质控范围等于所赋平均值 ±2 标准差。带有精确数值的实验用血清结果，可被实验室应用，保证检测方法的准确性。

见附录

【检验方法的局限性】

对于前列腺酸性磷酸酶总量或前列腺酸性磷酸酶，复溶后 30 分钟向 1mL 血清中加入一滴(25-30μL)0.7M 乙酸溶液，原料可稳定。稳定后，前列腺酸性磷酸酶总量或前列腺酸性磷酸酶在 25°C 至少稳定 2 小时，4°C 至少稳定 2 天，-20°C 冷冻时至少稳定 1 个月。

稳定期结束后，复溶血清中的碱性磷酸盐等级将升高。

推荐检测前复溶血清在 25°C 静置 1 小时。

血清中的胆红素具有光敏性，推荐血清应避光贮存。避光贮存 2~8°C 可稳定 3 天。不能在 15~25°C 贮存。不可冷冻。

游离脂肪酸在 2~8°C 可稳定 1 天。

复溶血清受细菌污染可导致许多成分稳定性降低。

不同批号的质控物不能交换使用，因为不同批号的质控物赋值不同。

质控物不可作为校准物质使用。

【注意事项】**安全预防与警告**

仅用于体外诊断。严禁用嘴吹吸试管。处理实验室中的试剂遵守标准预防措施。

按照对捐赠者血液检测标准，对来源于人体物质的人体免疫缺陷病毒（HIV1，HIV2）抗体，肝炎 B 表面抗原（HbsAg）和丙型肝炎病毒（HCV）抗体进行检测，并未发现活性。使用美国食品药品监督管理局认可的方法进行这些实验。

然而，因为没有任何方法能够提供绝对保证：无传染媒介，此物质和全部患者样本疑似具有传播传染病的能力，操作应进行相应的处理。

根据要求应用健康与安全数据表格。

【基本信息】

注册人/生产企业名称：Randox Laboratories Ltd.

住所：Ardmore, 55 Diamond Road, Crumlin, Co Antrim, BT29 4QY, UK

生产地址：Ardmore, 55 Diamond Road, Crumlin, Co Antrim, BT29 4QY, UK

联系方式：0044-2894422413

售后服务单位

售后服务单位名称：

住所：

联系方式：

代理人

代理人的名称：英国朗道实验诊断有限公司上海代表处

住所：上海市普陀区陕西北路 1438 号财富时代大厦 522、523 室

联系方式：021 6288 6240

【医疗器械注册证书编号/产品技术要求编号】

国械注进 20162404616

【说明书核准日期及修改日期】

核准日期：2016 年 11 月 1 日，修改日期：2019 年 1 月 1 日

(S) 24 May '19 ne

Abbott Alinity / Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.9	24.6	33.2	2.15	4.30	Bromocresol Green
	g/dl	2.89	2.46	3.32	0.22	0.43	
	g/l	28.3	24.1	32.5	2.10	4.20	Bromocresol Purple
	g/dl	2.83	2.41	3.25	0.21	0.42	
Alkaline Phosphatase	U/l	299	254	344	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	294	250	338	22.00	44.00	AMP non-optimised 37°C
	U/l	276	234	318	21.00	42.00	Colorimetric 37°C
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	254	216	292	19.00	38.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	343	292	394	25.50	51.00	Abbott Architect IFCC Cal. 37°C
	U/l	325	277	373	24.00	48.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bile Acids	µmol/l	49.4	39.5	59.3	4.95	9.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	29.3	23.1	35.5	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
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	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	92.3	72.9	112	9.70	19.40	Diazo with Sulphanilic Acid
	mg/dl	5.40	4.26	6.54	0.57	1.14	
	µmol/l	96.3	76.1	117	10.10	20.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.63	4.45	6.81	0.59	1.18	
	µmol/l	92.0	72.7	111	9.65	19.30	Nitrobenzenediazonium salt
	mg/dl	5.38	4.25	6.51	0.57	1.13	
Calcium	µmol/l	92.7	73.2	112	9.75	19.50	Diazonium ion
	mg/dl	5.42	4.28	6.56	0.57	1.14	
	mmol/l	2.96	2.66	3.26	0.15	0.30	Cresolphthalein complexone
	mg/dl	11.9	10.7	13.1	0.60	1.20	
Chloride	mmol/l	2.99	2.69	3.29	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Chloride	mmol/l	116	106	126	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.86	5.97	7.75	0.45	0.89	Cholesterol Oxidase
	mg/dl	265	230	300	17.50	35.00	
	mmol/l	6.98	6.07	7.89	0.46	0.91	Cholesterol Dehydrogenase
	mg/dl	269	234	304	17.50	35.00	
Cholinesterase	U/l	6306	5045	7567	630.50	1261.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	518	425	611	46.50	93.00	CK-NAC serum start (DGKC) 37°C
	U/l	507	416	598	45.50	91.00	CK-NAC substrate start (DGKC) 37°C
	U/l	505	414	596	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	495	406	584	44.50	89.00	Monothioglycerol 37°C
Copper	µmol/l	24.3	19.4	29.2	2.45	4.90	Colorimetric
	µg/dl	155	123	187	16.00	32.00	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	412	330	494	41.00	82.00	Alkaline picrate with deproteinization
	mg/dl	4.66	3.73	5.59	0.47	0.93	
	µmol/l	406	325	487	40.50	81.00	Alkaline picrate no deproteinization
	mg/dl	4.59	3.67	5.51	0.46	0.92	
	µmol/l	398	318	478	40.00	80.00	Enzymatic UV method
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	408	326	490	41.00	82.00	Jaffe rate blanked
	mg/dl	4.61	3.68	5.54	0.47	0.93	
Free T4	µmol/l	409	327	491	41.00	82.00	IDMS traceable
	mg/dl	4.62	3.70	5.54	0.46	0.92	
	pmol/l	47.4	35.6	59.2	5.90	11.80	Abbott Architect
gamma-GT	ng/dl	3.70	2.78	4.62	0.46	0.92	
	pg/ml	37.0	27.8	46.2	4.60	9.20	Abbott Architect
	U/l	171	145	197	13.00	26.00	Gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	U/l	171	145	197	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	170	144	196	13.00	26.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
HDL - Cholesterol	mg/dl	285	241	329	22.00	44.00	
	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Direct HDL PPD
	mg/dl	88.0	74.9	101	6.55	13.10	
	mmol/l	2.27	1.93	2.61	0.17	0.34	Direct HDL Immunoseparation
HDL - Cholesterol	mg/dl	87.6	74.5	101	6.55	13.10	
	mmol/l	2.39	2.03	2.75	0.18	0.36	Direct Clearance Method
	mg/dl	92.3	78.4	106	6.95	13.90	

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Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.27	1.93	2.61	0.17	0.34	HDL - Ultra
	mg/dl	87.6	74.5	101	6.55	13.10	
Iron	µmol/l	37.7	30.9	44.5	3.40	6.80	Colorimetric with ppt.
	µg/dl	211	173	249	19.00	38.00	
	µmol/l	36.9	30.3	43.5	3.30	6.60	Colorimetric without ppt.
	µg/dl	206	169	243	18.50	37.00	
Lactate	mmol/l	5.96	4.89	7.03	0.54	1.07	Colorimetric Lactate Oxidase
	mg/dl	53.7	44.1	63.3	4.80	9.60	
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P 37°C
	U/l	364	310	418	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	64	51	77	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	2.10	1.84	2.36	0.13	0.26	Spectrophotometric
	mg/dl	1.46	1.28	1.64	0.09	0.18	
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Arsenazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.66	1.46	1.86	0.10	0.20	Xylidyl Blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
	mmol/l	1.66	1.47	1.85	0.10	0.19	Enzymatic
	mg/dl	4.03	3.57	4.49	0.23	0.46	
Osmolality	mOsm/kg	363	290	436	36.50	73.00	Calculated
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.94	5.89	7.99	0.53	1.05	
	mmol/l	2.22	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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Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.32	5.81	6.83	0.26	0.51	ISE method - indirect
Protein Total	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	
	g/l	45.6	36.5	54.7	4.55	9.10	Biuret reaction kinetic
	g/dl	4.56	3.65	5.47	0.46	0.91	
PSA Total	ng/ml =	26.0	19.5	32.5	3.25	6.50	Abbott Architect
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.99	0.79	1.19	0.10	0.20	Abbott Architect
TIBC	µmol/l	46.2	36.5	55.9	4.85	9.70	FE+UIBC(saturation with iron)
	µg/dl	258	204	312	27.00	54.00	
Total T4	nmol/l	205	154	256	25.50	51.00	Abbott Architect
	µg/dl	16.0	12.0	20.0	2.00	4.00	
	ng/ml	160	120	200	20.00	40.00	Abbott Architect
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	2.80	2.36	3.24	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	248	209	287	19.50	39.00	
	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	245	206	284	19.50	39.00	
Urea	mmol/l	20.4	17.3	23.5	1.55	3.10	Urease end point
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	20.2	17.2	23.2	1.50	3.00	Urease kinetic
mg/dl	121	103	139	9.00	18.00		


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Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase 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	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.34	8.13	10.6	0.61	1.21	
Zinc	µmol/l	32.2	25.8	38.6	3.20	6.40	Colorimetric with deproteinisation
	µg/dl	210	168	252	21.00	42.00	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
Alkaline Phosphatase	U/l	295	251	339	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	230	196	264	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	189	160	218	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	164	131	197	16.50	33.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	164	131	197	16.50	33.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Bilirubin Total	µmol/l	94.2	74.4	114	9.90	19.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.51	4.35	6.67	0.58	1.16	
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	2.99	2.69	3.29	0.15	0.30	Arsenazo III
mg/dl	12.0	10.8	13.2	0.60	1.20		
Chloride	mmol/l	115	106	124	4.50	9.00	ISE direct
Cholesterol	mmol/l	7.07	6.15	7.99	0.46	0.92	Cholesterol Oxidase
	mg/dl	273	237	309	18.00	36.00	
CK Total	U/l	486	398	574	44.00	88.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	370	296	444	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.18	3.34	5.02	0.42	0.84	

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	377	301	453	38.00	76.00	Jaffe rate blanked
	mg/dl	4.26	3.40	5.12	0.43	0.86	
gamma-GT	U/l	169	143	195	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.22	1.89	2.55	0.17	0.33	Direct HDL PPD
	mg/dl	85.7	73.0	98.4	6.35	12.70	
	mmol/l	2.15	1.83	2.47	0.16	0.32	HDL - Ultra
	mg/dl	83.0	70.6	95.4	6.20	12.40	
Iron	µmol/l	34.3	28.1	40.5	3.10	6.20	Colorimetric without ppt.
	µg/dl	192	157	227	17.50	35.00	
LD (LDH)	U/l	739	628	850	55.50	111.00	P->L German methods 37°C
	U/l	366	311	421	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	55	44	66	5.50	11.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.53	1.34	1.72	0.10	0.19	Xylidyl Blue
	mg/dl	3.72	3.26	4.18	0.23	0.46	
Phosphate Inorganic	mmol/l	2.43	2.07	2.79	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.53	6.42	8.64	0.56	1.11	
Potassium	mmol/l	6.05	5.57	6.53	0.24	0.48	ISE method - direct
Protein Total	g/l	47.0	37.6	56.4	4.70	9.40	Biuret reaction end point
	g/dl	4.70	3.76	5.64	0.47	0.94	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	

**ABX Pentra 400®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	
Uric Acid (Urate)	mmol/l	0.51	0.44	0.58	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.57	7.46	9.68	0.56	1.11	
	mmol/l	0.53	0.46	0.60	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.97	7.80	10.1	0.59	1.17	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

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	
Alkaline Phosphatase	U/l	353	300	406	26.50	53.00	Diethanolamine buffer DEA 37°C
	U/l	367	312	422	27.50	55.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	152	122	182	15.00	30.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	246	209	283	18.50	37.00	Immuno-inhibition EPS substrate 37°C
	U/l	254	216	292	19.00	38.00	Roche EPS Liquid 37°C
	U/l	257	219	295	19.00	38.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	277	235	319	21.00	42.00	pNP Maltotriose substrates 37°C
	U/l	270	229	311	20.50	41.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	283	241	325	21.00	42.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	289	246	332	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	289	246	332	21.50	43.00	Beckman Synchron AMY7 37°C
	U/l	293	249	337	22.00	44.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.2	14.4	22.0	1.90	3.80	Enzymatic
Bile Acids	µmol/l	49.6	39.7	59.5	4.95	9.90	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	25.5	20.2	30.8	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Bilirubin Direct	µmol/l	27.3	21.6	33.0	2.85	5.70	Diazo with Dichloroaniline (DCA)	
	mg/dl	1.60	1.26	1.94	0.17	0.34		
Bilirubin Total	µmol/l	93.4	73.8	113	9.80	19.60	Diazo with Dichloroaniline (DCA)	
	mg/dl	5.46	4.32	6.60	0.57	1.14		
	µmol/l	93.5	73.9	113	9.80	19.60	Diazo with Sulphanilic Acid	
	mg/dl	5.47	4.32	6.62	0.58	1.15		
	µmol/l	93.0	73.5	113	9.75	19.50	Dichlorophenyl Diazonium (DPD)	
	mg/dl	5.44	4.30	6.58	0.57	1.14		
	µmol/l	87.7	69.3	106	9.20	18.40	Diazonium ion	
	mg/dl	5.13	4.05	6.21	0.54	1.08		
	µmol/l	94.0	74.2	114	9.90	19.80	Oxidation to Biliverdin/Vanadate	
	mg/dl	5.50	4.34	6.66	0.58	1.16		
Calcium	mmol/l	2.97	2.67	3.27	0.15	0.30	Cresolphthalein complexone	
	mg/dl	11.9	10.7	13.1	0.60	1.20		
	mmol/l	2.94	2.65	3.23	0.15	0.29	Ion selective electrode	
	mg/dl	11.8	10.6	13.0	0.60	1.20		
	mmol/l	2.99	2.69	3.29	0.15	0.30	Arsenazo III	
	mg/dl	12.0	10.8	13.2	0.60	1.20		
	Chloride	mmol/l	115	106	124	4.50	9.00	Colorimetric
		mmol/l	115	106	124	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.04	6.12	7.96	0.46	0.92	Cholesterol Oxidase	
	mg/dl	272	236	308	18.00	36.00		
Cholinesterase	U/l	5122	4097	6147	512.50	1025.00	Colorimetric Butyrylthiocholine 37°C	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	518	425	611	46.50	93.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	365	292	438	36.50	73.00	Alkaline picrate with deproteinization
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	368	294	442	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	µmol/l	394	316	472	39.00	78.00	Enzymatic UV method
	mg/dl	4.45	3.57	5.33	0.44	0.88	
	µmol/l	399	319	479	40.00	80.00	Creatinine PAP method
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	369	295	443	37.00	74.00	Jaffe rate blanked
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	368	294	442	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.16	3.32	5.00	0.42	0.84	
µmol/l	378	302	454	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	4.27	3.41	5.13	0.43	0.86		
µmol/l	375	300	450	37.50	75.00	IDMS traceable	
mg/dl	4.24	3.39	5.09	0.43	0.85		
D-3-Hydroxybutyrate	mmol/l	1.19	1.01	1.37	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	170	144	196	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	172	146	198	13.00	26.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	173	147	199	13.00	26.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	176	149	203	13.50	27.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	32	25	39	3.50	7.00	Triethanolamine buffer 50 mmol 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	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose dehydrogenase	
	mg/dl	283	240	326	21.50	43.00		
	mmol/l	15.8	13.5	18.1	1.15	2.30	Hexokinase	
	mg/dl	285	243	327	21.00	42.00		
	mmol/l	15.9	13.6	18.2	1.15	2.30	Glucose oxidase	
	mg/dl	287	245	329	21.00	42.00		
	HDL - Cholesterol	mmol/l	2.48	2.11	2.85	0.19	0.37	Direct HDL Immunoseparation
		mg/dl	95.7	81.4	110	7.15	14.30	
	mmol/l	2.43	2.06	2.80	0.19	0.37	Direct Clearance Method	
	mg/dl	93.8	79.5	108	7.15	14.30		
	mmol/l	2.53	2.15	2.91	0.19	0.38	Direct HDL Roche 3rd generation	
	mg/dl	97.7	83.0	112	7.35	14.70		
	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	37.4	30.7	44.1	3.35	6.70	Colorimetric with ppt.	
	µg/dl	209	172	246	18.50	37.00		
	µmol/l	37.0	30.3	43.7	3.35	6.70	Colorimetric without ppt.	
	µg/dl	207	169	245	19.00	38.00		
Lactate	mmol/l	5.59	4.58	6.60	0.51	1.01	Colorimetric Lactate Oxidase	
	mg/dl	50.4	41.3	59.5	4.55	9.10		
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P 37°C	
	U/l	813	691	935	61.00	122.00	P->L Scandinavian & Dutch 37°C	
	U/l	756	642	870	57.00	114.00	P->L German methods 37°C	
	U/l	378	321	435	28.50	57.00	L->P IFCC 37°C	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LD (LDH)	U/l	378	321	435	28.50	57.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	66	53	79	6.50	13.00	Other Colorimetric 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Ion selective electrode
	mg/dl	1.47	1.29	1.65	0.09	0.18	
	mmol/l	2.15	1.89	2.41	0.13	0.26	Spectrophotometric
	mg/dl	1.49	1.31	1.67	0.09	0.18	
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	1.66	1.46	1.86	0.10	0.20	Methylthymol blue
	mg/dl	4.03	3.55	4.51	0.24	0.48	
Osmolality	mOsm/kg	349	279	419	35.00	70.00	Calculated
Phosphate Inorganic	mmol/l	2.24	1.91	2.57	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.94	5.92	7.96	0.51	1.02	
	mmol/l	2.26	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	6.32	5.81	6.83	0.26	0.51	ISE method - indirect
	g/l	45.0	36.0	54.0	4.50	9.00	
	g/dl	4.50	3.60	5.40	0.45	0.90	Biuret reaction kinetic
	g/l	45.5	36.4	54.6	4.55	9.10	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.0	37.1	56.9	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	263	207	319	28.00	56.00	

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	46.7	36.9	56.5	4.90	9.80	Direct Colorimetric
	µg/dl	261	206	316	27.50	55.00	
	µmol/l	36.0	28.4	43.6	3.80	7.60	Calculated from Transferrin
	µg/dl	201	159	243	21.00	42.00	
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.79	2.35	3.23	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	247	208	286	19.50	39.00	
	mmol/l	2.79	2.34	3.24	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.83	2.38	3.28	0.23	0.45	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	250	211	289	19.50	39.00	
UIBC	µmol/l	10.3	8.42	12.2	0.94	1.88	Direct Colorimetric
	µg/dl	57.6	47.1	68.1	5.25	10.50	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Beckman-Conductivity
	mg/dl	119	101	137	9.00	18.00	
	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	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease hypochlorite
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
	mg/dl	56.4	47.9	64.9	4.25	8.50	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.63	8.38	10.9	0.63	1.25	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.54	8.32	10.8	0.61	1.22	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.49	8.27	10.7	0.61	1.22	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	29.0	24.7	33.3	2.15	4.30	Bromocresol Purple
	g/dl	2.90	2.47	3.33	0.22	0.43	
Alkaline Phosphatase	U/l	316	269	363	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	314	267	361	23.50	47.00	AMP non-optimised 37°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	143	114	172	14.50	29.00	Tris buffer SCE 37°C
	U/l	137	109	165	14.00	28.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	299	254	344	22.50	45.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	302	257	347	22.50	45.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	297	253	341	22.00	44.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	144	115	173	14.50	29.00	Tris buffer SCE 37°C
	U/l	142	114	170	14.00	28.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	18.2	14.4	22.0	1.90	3.80	Differential rate pH change
	mmol/l	16.6	13.2	20.0	1.70	3.40	Ion selective electrode
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	90.2	71.3	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.28	4.17	6.39	0.56	1.11	

Beckman CX4/5/7/9/LX20®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.91	2.62	3.20	0.15	0.29	Ion selective electrode
	mg/dl	11.7	10.5	12.9	0.60	1.20	
	mmol/l	2.89	2.60	3.18	0.15	0.29	Arsenazo III
	mg/dl	11.6	10.4	12.8	0.60	1.20	
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.89	6.00	7.78	0.45	0.89	Cholesterol Oxidase
	mg/dl	266	232	300	17.00	34.00	
Cholinesterase	U/l	5425	4340	6510	542.50	1085.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	505	414	596	45.50	91.00	CK-NAC substrate start (DGKC) 37°C
	U/l	512	420	604	46.00	92.00	CK-NAC (IFCC) 37°C
	U/l	516	423	609	46.50	93.00	Monothioglycerol 37°C
	U/l	512	419	605	46.50	93.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	388	311	465	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.38	3.51	5.25	0.44	0.87	
	µmol/l	378	303	453	37.50	75.00	Enzymatic UV method
	mg/dl	4.27	3.42	5.12	0.43	0.85	
	µmol/l	387	310	464	38.50	77.00	Jaffe rate blanked
	mg/dl	4.37	3.50	5.24	0.44	0.87	
µmol/l	392	314	470	39.00	78.00	IDMS traceable	
mg/dl	4.43	3.55	5.31	0.44	0.88		
Free T4	pmol/l	63.9	47.9	79.9	8.00	16.00	Beckman Dxl800
	ng/dl	4.98	3.74	6.22	0.62	1.24	
	pg/ml	49.8	37.4	62.2	6.20	12.40	Beckman Dxl800
gamma-GT	U/l	136	115	157	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	138	117	159	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C

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Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	137	116	158	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	138	117	159	10.50	21.00	Beckman Szasz (Extinction Coeff) 37°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	GOD/02-Beckman method
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Oxygen electrode
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.37	2.02	2.72	0.18	0.35	Direct HDL PPD
	mg/dl	91.5	78.0	105	6.75	13.50	
	mmol/l	2.37	2.01	2.73	0.18	0.36	HDL - Ultra
	mg/dl	91.5	77.6	105	6.95	13.90	
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	
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	300	255	345	22.50	45.00	L->P 37°C
	U/l	973	827	1119	73.00	146.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	293	249	337	22.00	44.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	69	55	83	7.00	14.00	Other Colorimetric 37°C
Lithium	mmol/l	2.05	1.81	2.29	0.12	0.24	Spectrophotometric
	mg/dl	1.42	1.26	1.58	0.08	0.16	
Magnesium	mmol/l	1.64	1.44	1.84	0.10	0.20	Calmagite
	mg/dl	3.99	3.50	4.48	0.25	0.49	

Beckman CX4/5/7/9/LX20®

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Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Osmolality	mOsm/kg	356	285	427	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.29	1.94	2.64	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.10	6.01	8.19	0.55	1.09	
Potassium	mmol/l	6.28	5.77	6.79	0.26	0.51	ISE method - indirect
Protein Total	g/l	44.5	35.6	53.4	4.45	8.90	Biuret reaction CX4/5/7
	g/dl	4.45	3.56	5.34	0.45	0.89	
	g/l	43.8	35.1	52.5	4.35	8.70	Biuret reaction end point
	g/dl	4.38	3.51	5.25	0.44	0.87	
	g/l	43.8	35.1	52.5	4.35	8.70	
g/dl	4.38	3.51	5.25	0.44	0.87		
PSA Total	ng/ml =	29.8	22.3	37.3	3.75	7.50	Beckman DXI standardised to Hybritech
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.06	0.85	1.27	0.11	0.21	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	49.7	39.3	60.1	5.20	10.40	FE+UIBC(saturation with iron)
	µg/dl	278	220	336	29.00	58.00	
Total T3	nmol/l	3.61	2.71	4.51	0.45	0.90	Beckman Dxl800
	ng/ml	2.35	1.76	2.94	0.30	0.59	
	ng/dl	235	176	294	29.50	59.00	Beckman Dxl800
Total T4	nmol/l	249	187	311	31.00	62.00	Beckman Dxl800
	µg/dl	19.4	14.6	24.2	2.40	4.80	
	ng/ml	194	146	242	24.00	48.00	Beckman Dxl800
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	2.86	2.40	3.32	0.23	0.46	L/G Kinase EP. no correction
mg/dl	253	212	294	20.50	41.00		

**Beckman CX4/5/7/9/LX20®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Beckman-Conductivity
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.89	7.73	10.1	0.58	1.16	

Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	29.0	24.6	33.4	2.20	4.40	Bromocresol Purple
	g/dl	2.90	2.46	3.34	0.22	0.44	
Alkaline Phosphatase	U/l	316	269	363	23.50	47.00	AMP optimised to IFCC 37°C
	U/l	314	266	362	24.00	48.00	AMP non-optimised 37°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	143	114	172	14.50	29.00	Tris buffer SCE 37°C
	U/l	136	109	163	13.50	27.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	299	254	344	22.50	45.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	301	256	346	22.50	45.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	297	253	341	22.00	44.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	144	115	173	14.50	29.00	Tris buffer SCE 37°C
	U/l	141	113	169	14.00	28.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	18.1	14.3	21.9	1.90	3.80	Differential rate pH change
	mmol/l	16.6	13.2	20.0	1.70	3.40	Ion selective electrode
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	90.2	71.3	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.28	4.17	6.39	0.56	1.11	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.90	2.61	3.19	0.15	0.29	Ion selective electrode
	mg/dl	11.6	10.5	12.7	0.55	1.10	
	mmol/l	2.87	2.59	3.15	0.14	0.28	Arsenazo III
	mg/dl	11.5	10.4	12.6	0.55	1.10	
Chloride	mmol/l	115	105	125	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.88	5.99	7.77	0.45	0.89	Cholesterol Oxidase
	mg/dl	266	231	301	17.50	35.00	
Cholinesterase	U/l	5448	4359	6537	544.50	1089.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	505	414	596	45.50	91.00	CK-NAC substrate start (DGKC) 37°C
	U/l	517	424	610	46.50	93.00	CK-NAC (IFCC) 37°C
	U/l	518	425	611	46.50	93.00	Monothioglycerol 37°C
	U/l	512	419	605	46.50	93.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	388	311	465	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.38	3.51	5.25	0.44	0.87	
	µmol/l	378	303	453	37.50	75.00	Enzymatic UV method
	mg/dl	4.27	3.42	5.12	0.43	0.85	
	µmol/l	387	309	465	39.00	78.00	Jaffe rate blanked
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	µmol/l	392	314	470	39.00	78.00	IDMS traceable
	mg/dl	4.43	3.55	5.31	0.44	0.88	
gamma-GT	U/l	137	117	157	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	138	117	159	10.50	21.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	136	116	156	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	138	117	159	10.50	21.00	Beckman Szasz (Extinction Coeff) 37°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	GOD/02-Beckman method
	mg/dl	276	234	318	21.00	42.00	

Beckman DxC600/800®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Oxygen electrode
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	2.36	2.00	2.72	0.18	0.36	Direct HDL PPD
	mg/dl	91.1	77.2	105	6.95	13.90	
	mmol/l	2.37	2.01	2.73	0.18	0.36	HDL - Ultra
	mg/dl	91.5	77.6	105	6.95	13.90	
Iron	µmol/l	35.9	29.4	42.4	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	164	238	18.50	37.00	
Lactate	mmol/l	5.15	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	299	255	343	22.00	44.00	L->P 37°C
	U/l	963	819	1107	72.00	144.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	297	253	341	22.00	44.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	70	56	84	7.00	14.00	Other Colorimetric 37°C
Lithium	mmol/l	2.05	1.81	2.29	0.12	0.24	Spectrophotometric
	mg/dl	1.42	1.26	1.58	0.08	0.16	
Magnesium	mmol/l	1.64	1.44	1.84	0.10	0.20	Calmagite
	mg/dl	3.99	3.50	4.48	0.25	0.49	
Osmolality	mOsm/kg	356	285	427	35.50	71.00	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	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	6.28	5.78	6.78	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	43.8	35.1	52.5	4.35	8.70	Biuret reaction kinetic
	g/dl	4.38	3.51	5.25	0.44	0.87	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - indirect
TIBC	µmol/l	49.7	39.2	60.2	5.25	10.50	FE+UIBC(saturation with iron)
	µg/dl	278	219	337	29.50	59.00	
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	2.86	2.40	3.32	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	253	212	294	20.50	41.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Beckman-Conductivity
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.87	7.71	10.0	0.58	1.16	

BIOSYSTEMS A15

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
Alkaline Phosphatase	U/l	306	260	352	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	238	203	273	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	196	166	226	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	115	92	138	11.50	23.00	Tris buffer without P5P 30°C
	U/l	87	70	104	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	162	130	194	16.00	32.00	Tris buffer without P5P 37°C
	U/l	110	88	132	11.00	22.00	Tris buffer without P5P 30°C
	U/l	77	62	92	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	95.7	75.6	116	10.05	20.10	Diazo with Sulphanilic Acid
	mg/dl	5.60	4.42	6.78	0.59	1.18	
Calcium	mmol/l	2.95	2.65	3.25	0.15	0.30	Arsenazo III
	mg/dl	11.8	10.6	13.0	0.60	1.20	
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
Creatinine	µmol/l	383	306	460	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked
	mg/dl	4.12	3.30	4.94	0.41	0.82	

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
Phosphate Inorganic	mmol/l	2.45	2.08	2.82	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.60	6.45	8.75	0.58	1.15	
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	2.74	2.30	3.18	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	242	204	280	19.00	38.00	
Urea	mmol/l	19.8	16.9	22.7	1.45	2.90	Urease end point
	mg/dl	119	102	136	8.50	17.00	
	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	0.59	0.51	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.91	8.62	11.2	0.65	1.29	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.73	8.47	11.0	0.63	1.26	

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

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Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
Alkaline Phosphatase	U/l	306	260	352	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	238	203	273	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	196	166	226	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
	U/l	118	94	142	12.00	24.00	Tris buffer without P5P 30°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	163	131	195	16.00	32.00	Tris buffer without P5P 37°C
	U/l	110	89	131	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
Bilirubin Total	µmol/l	92.8	73.3	112	9.75	19.50	Diazo with Sulphanilic Acid
	mg/dl	5.43	4.29	6.57	0.57	1.14	
Calcium	mmol/l	2.95	2.65	3.25	0.15	0.30	Arsenazo III
	mg/dl	11.8	10.6	13.0	0.60	1.20	
Cholesterol	mmol/l	7.09	6.17	8.01	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
Cholinesterase	U/l	4778	3822	5734	478.00	956.00	Colorimetric Butyrylthiocholine 37°C
Creatinine	µmol/l	349	279	419	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.94	3.15	4.73	0.40	0.79	
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase	
	mg/dl	287	243	331	22.00	44.00		
Protein Total	g/l	48.1	38.5	57.7	4.80	9.60	Biuret reaction end point	
	g/dl	4.81	3.85	5.77	0.48	0.96		
Triglycerides	mmol/l	2.70	2.27	3.13	0.22	0.43	Lipase/GPO-PAP no correction	
	mg/dl	239	201	277	19.00	38.00		
	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		
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease end point	
	mg/dl	119	101	137	9.00	18.00		
	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	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
		mg/dl	9.48	8.25	10.7	0.62	1.23	
mmol/l		0.59	0.51	0.67	0.04	0.08	Uricase peroxidase no ascorbate oxidase	
mg/dl		9.93	8.64	11.2	0.65	1.29		

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
Alkaline Phosphatase	U/l	475	404	546	35.50	71.00	Diethanolamine buffer DEA 37°C
	U/l	370	315	425	27.50	55.00	Diethanolamine buffer DEA 30°C
	U/l	304	258	350	23.00	46.00	Diethanolamine buffer DEA 25°C
	U/l	310	264	356	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	241	206	276	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	198	169	227	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
	U/l	112	90	134	11.00	22.00	Tris buffer without P5P 30°C
	U/l	85	68	102	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	158	126	190	16.00	32.00	Tris buffer without P5P 37°C
	U/l	107	85	129	11.00	22.00	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	28.8	22.8	34.8	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	26.9	21.3	32.5	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
Bilirubin Total	µmol/l	90.3	71.3	109	9.50	19.00	Diazo with Dichloroaniline (DCA)
	mg/dl	5.28	4.17	6.39	0.56	1.11	
	µmol/l	91.2	72.1	110	9.55	19.10	Diazo with Sulphanilic Acid
	mg/dl	5.34	4.22	6.46	0.56	1.12	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	82.2	65.0	99.4	8.60	17.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.81	3.80	5.82	0.51	1.01	
Calcium	mmol/l	2.97	2.68	3.26	0.15	0.29	Cresolphthalein complexone
	mg/dl	11.9	10.7	13.1	0.60	1.20	
	mmol/l	2.92	2.63	3.21	0.15	0.29	Arsenazo III
	mg/dl	11.7	10.5	12.9	0.60	1.20	
Chloride	mmol/l	115	106	124	4.50	9.00	Colorimetric
Cholesterol	mmol/l	7.04	6.12	7.96	0.46	0.92	Cholesterol Oxidase
	mg/dl	272	236	308	18.00	36.00	
Cholinesterase	U/l	5110	4088	6132	511.00	1022.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	490	401	579	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	307	251	363	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	208	170	246	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	371	297	445	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.19	3.36	5.02	0.42	0.83	
	µmol/l	364	291	437	36.50	73.00	Jaffe rate blanked
	mg/dl	4.11	3.29	4.93	0.41	0.82	
gamma-GT	U/l	165	140	190	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	130	110	150	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	86	118	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	159	136	182	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	125	107	143	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	98	84	112	7.00	14.00	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	

Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	33.8	27.7	39.9	3.05	6.10	Colorimetric with ppt.
	µg/dl	189	155	223	17.00	34.00	
	µmol/l	34.6	28.3	40.9	3.15	6.30	Colorimetric without ppt.
	µg/dl	193	158	228	17.50	35.00	
Lipase	U/l	66	53	79	6.50	13.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.63	1.43	1.83	0.10	0.20	Xylidyl Blue
	mg/dl	3.96	3.47	4.45	0.25	0.49	
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	6.29	5.79	6.79	0.25	0.50	ISE method - indirect
Protein Total	g/l	49.2	39.4	59.0	4.90	9.80	Biuret reaction end point
	g/dl	4.92	3.94	5.90	0.49	0.98	
Sodium	mmol/l	165	156	174	4.50	9.00	ISE method - indirect
Triglycerides	mmol/l	2.75	2.31	3.19	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.50	39.00	
Urea	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.85	7.69	10.0	0.58	1.16	
	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.03	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	9.02	7.86	10.2	0.58	1.16		

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

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	30.8	26.2	35.4	2.30	4.60	Bromocresol Purple
	g/dl	3.08	2.62	3.54	0.23	0.46	
	g/l	28.8	24.5	33.1	2.15	4.30	Turbidimetric Assays
	g/dl	2.88	2.45	3.31	0.22	0.43	
Alkaline Phosphatase	U/l	267	227	307	20.00	40.00	AMP optimised to IFCC 37°C
	U/l	208	177	239	15.50	31.00	AMP optimised to IFCC 30°C
	U/l	171	145	197	13.00	26.00	AMP optimised to IFCC 25°C
	U/l	277	236	318	20.50	41.00	Colorimetric 37°C
	U/l	216	184	248	16.00	32.00	Colorimetric 30°C
	U/l	177	151	203	13.00	26.00	Colorimetric 25°C
ALT (GPT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
	U/l	104	84	124	10.00	20.00	Tris buffer without P5P 30°C
	U/l	79	64	94	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	265	225	305	20.00	40.00	Roche EPS Liquid 37°C
Amylase Total	U/l	284	242	326	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	282	240	324	21.00	42.00	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

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	17.9	14.2	21.6	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	31.8	25.1	38.5	3.35	6.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.86	1.47	2.25	0.20	0.39	
	µmol/l	31.8	25.1	38.5	3.35	6.70	Diazo with Sulphanilic Acid
	mg/dl	1.86	1.47	2.25	0.20	0.39	
	µmol/l	32.1	25.4	38.8	3.35	6.70	Roche JG factored
	mg/dl	1.88	1.49	2.27	0.20	0.39	
	µmol/l	31.0	24.5	37.5	3.25	6.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Bilirubin Total	µmol/l	81.6	64.5	98.7	8.55	17.10	Diazo with Dichloroaniline (DCA)
	mg/dl	4.77	3.77	5.77	0.50	1.00	
	µmol/l	83.9	66.3	102	8.80	17.60	Diazo with Sulphanilic Acid
	mg/dl	4.91	3.88	5.94	0.52	1.03	
	µmol/l	82.5	65.2	99.8	8.65	17.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.83	3.81	5.85	0.51	1.02	
	µmol/l	83.3	65.8	101	8.75	17.50	Diazonium ion
	mg/dl	4.87	3.85	5.89	0.51	1.02	
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	3.00	2.70	3.30	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	mmol/l	3.02	2.71	3.33	0.16	0.31	NM-BAPTA
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.79	5.91	7.67	0.44	0.88	Cholesterol Oxidase
	mg/dl	262	228	296	17.00	34.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5642	4513	6771	564.50	1129.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	484	397	571	43.50	87.00	CK-NAC serum start (DGKC) 37°C
	U/l	303	249	357	27.00	54.00	CK-NAC serum start (DGKC) 30°C
	U/l	206	169	243	18.50	37.00	CK-NAC serum start (DGKC) 25°C
	U/l	490	402	578	44.00	88.00	CK-NAC substrate start (DGKC) 37°C
	U/l	307	252	362	27.50	55.00	CK-NAC substrate start (DGKC) 30°C
	U/l	208	171	245	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	488	400	576	44.00	88.00	CK-NAC (IFCC) 37°C
	U/l	305	250	360	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	378	302	454	38.00	76.00	Alkaline picrate with deproteinization
	mg/dl	4.27	3.41	5.13	0.43	0.86	
	µmol/l	385	308	462	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	391	312	470	39.50	79.00	Enzymatic UV method
	mg/dl	4.42	3.53	5.31	0.45	0.89	
	µmol/l	386	309	463	38.50	77.00	Roche Creatinine Plus
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	368	294	442	37.00	74.00	Jaffe rate blanked
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	µmol/l	380	304	456	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	379	303	455	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.28	3.42	5.14	0.43	0.86	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	166	141	191	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	131	111	151	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	87	117	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	176	149	203	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	117	161	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	92	126	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	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	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	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	
HDL - Cholesterol	mmol/l	2.97	2.52	3.42	0.23	0.45	Direct HDL Roche 3rd generation
	mg/dl	115	97.3	133	8.85	17.70	
	mmol/l	3.20	2.72	3.68	0.24	0.48	Direct HDL Roche 4th Generation
	mg/dl	124	105	143	9.50	19.00	
Iron	µmol/l	37.0	30.3	43.7	3.35	6.70	Colorimetric with ppt.
	µg/dl	207	169	245	19.00	38.00	
	µmol/l	36.7	30.1	43.3	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
Lactate	mmol/l	5.81	4.76	6.86	0.53	1.05	Colorimetric Lactate Oxidase
	mg/dl	52.3	42.9	61.7	4.70	9.40	
LD (LDH)	U/l	386	328	444	29.00	58.00	L->P 37°C
	U/l	279	237	321	21.00	42.00	L->P 30°C
	U/l	196	166	226	15.00	30.00	L->P 25°C

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	703	598	808	52.50	105.00	P->L German methods 37°C
	U/l	508	432	584	38.00	76.00	P->L German methods 30°C
	U/l	356	303	409	26.50	53.00	P->L German methods 25°C
	U/l	392	333	451	29.50	59.00	L->P IFCC 37°C
	U/l	283	240	326	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	65	52	78	6.50	13.00	Roche Colorimetric 37°C
	U/l	62	50	74	6.00	12.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.17	1.91	2.43	0.13	0.26	Ion selective electrode
	mg/dl	1.51	1.33	1.69	0.09	0.18	
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	1.72	1.51	1.93	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.18	3.67	4.69	0.26	0.51	
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	2.33	1.98	2.68	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.22	6.14	8.30	0.54	1.08	
Potassium	mmol/l	6.39	5.88	6.90	0.26	0.51	ISE method - indirect
Protein Total	g/l	43.0	34.4	51.6	4.30	8.60	Biuret reaction end point
	g/dl	4.30	3.44	5.16	0.43	0.86	
	g/l	43.3	34.6	52.0	4.35	8.70	Biuret reaction kinetic
	g/dl	4.33	3.46	5.20	0.44	0.87	
Sodium	mmol/l	161	153	169	4.00	8.00	ISE method - indirect
TIBC	µmol/l	45.9	36.3	55.5	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	257	203	311	27.00	54.00	

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
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	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	250	210	290	20.00	40.00		
	mmol/l	2.90	2.44	3.36	0.23	0.46	L/G Kinase EP. no correction	
	mg/dl	257	216	298	20.50	41.00		
Urea	mmol/l	2.86	2.40	3.32	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	253	212	294	20.50	41.00		
	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/Glycerol Dehydrogenase	
	mg/dl	251	211	291	20.00	40.00		
	Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease end point
		mg/dl	115	98.0	132	8.50	17.00	
mmol/l		19.3	16.4	22.2	1.45	2.90	Urease kinetic	
mg/dl		116	98.6	133	8.70	17.40		
Uric Acid (Urate)	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		
	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		
Uric Acid (Urate)	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase	
	mg/dl	9.39	8.18	10.6	0.61	1.21		
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm	
	mg/dl	9.39	8.18	10.6	0.61	1.21		

Elitech/Vitalab Selectra Series

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	31.2	26.5	35.9	2.35	4.70	Bromocresol Green
	g/dl	3.12	2.65	3.59	0.24	0.47	
ALT (GPT)	U/l	153	123	183	15.00	30.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	148	118	178	15.00	30.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	91.9	72.6	111	9.65	19.30	Diazo with Dichloroaniline (DCA)
	mg/dl	5.38	4.25	6.51	0.57	1.13	
	µmol/l	93.5	73.9	113	9.80	19.60	Diazo with Sulphanilic Acid
	mg/dl	5.47	4.32	6.62	0.58	1.15	
Calcium	mmol/l	2.97	2.67	3.27	0.15	0.30	Arsenazo III
	mg/dl	11.9	10.7	13.1	0.60	1.20	
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
CK Total	U/l	507	416	598	45.50	91.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	342	274	410	34.00	68.00	Alkaline picrate no deproteinization
	mg/dl	3.86	3.10	4.62	0.38	0.76	
	µmol/l	369	295	443	37.00	74.00	Enzymatic UV method
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	374	299	449	37.50	75.00	Creatinine PAP method
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	338	270	406	34.00	68.00	Jaffe rate blanked
	mg/dl	3.82	3.05	4.59	0.39	0.77	

Elitech/Vitalab Selectra Series

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Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.58	2.19	2.97	0.20	0.39	Direct Clearance Method
	mg/dl	99.6	84.5	115	7.55	15.10	
	mmol/l	2.18	1.85	2.51	0.17	0.33	HDL - Ultra
	mg/dl	84.1	71.4	96.8	6.35	12.70	
LD (LDH)	U/l	371	316	426	27.50	55.00	L->P IFCC 37°C
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	
Protein Total	g/l	48.1	38.5	57.7	4.80	9.60	Biuret reaction end point
	g/dl	4.81	3.85	5.77	0.48	0.96	
Triglycerides	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.87	2.41	3.33	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	254	213	295	20.50	41.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
	mg/dl	54.4	46.2	62.6	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.74	8.47	11.0	0.64	1.27	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.86	8.57	11.2	0.65	1.29	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.54	8.30	10.8	0.62	1.24	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	25.3	17.0	33.6	4.15	8.30	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	29.6	25.1	34.1	2.25	4.50	Bromocresol Green
	g/dl	2.96	2.51	3.41	0.23	0.45	
Alkaline Phosphatase	U/l	253	215	291	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	197	167	227	15.00	30.00	Roche Integra AMP buffer 30°C
	U/l	162	137	187	12.50	25.00	Roche Integra AMP buffer 25°C
	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	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
Amylase Pancreatic	U/l	251	214	288	18.50	37.00	Roche EPS Liquid 37°C
	U/l	301	256	346	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	312	265	359	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	154	123	185	15.50	31.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	49.4	39.5	59.3	4.95	9.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	28.0	22.1	33.9	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.29	1.99	0.18	0.35	

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Bilirubin Direct	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Bilirubin Total	µmol/l	91.1	72.0	110	9.55	19.10	Diazo with Dichloroaniline (DCA)
	mg/dl	5.33	4.21	6.45	0.56	1.12	
	µmol/l	89.3	70.5	108	9.40	18.80	Diazo with Sulphanilic Acid
	mg/dl	5.22	4.12	6.32	0.55	1.10	
Calcium	µmol/l	87.1	68.8	105	9.15	18.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.10	4.02	6.18	0.54	1.08	
	mmol/l	3.01	2.71	3.31	0.15	0.30	Cresolphthalein complexone
		mg/dl	12.1	10.9	13.3	0.60	
mmol/l	3.00	2.70	3.30	0.15	0.30	Arsenazo III	
	mg/dl	12.0	10.8	13.2	0.60		1.20
mmol/l	3.02	2.72	3.32	0.15	0.30	Phosphonazo	
	mg/dl	12.1	10.9	13.3	0.60		1.20
Chloride	mmol/l	114	105	123	4.50	9.00	Colorimetric
	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.96	6.06	7.86	0.45	0.90	Cholesterol Oxidase
	mg/dl	269	234	304	17.50	35.00	
Cholinesterase	U/l	5271	4216	6326	527.50	1055.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	503	412	594	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	315	258	372	28.50	57.00	CK-NAC (IFCC) 30°C
	U/l	214	175	253	19.50	39.00	CK-NAC (IFCC) 25°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	362	289	435	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.27	4.91	0.41	0.82	
	µmol/l	368	295	441	36.50	73.00	Creatinine PAP method
	mg/dl	4.16	3.33	4.99	0.42	0.83	
	µmol/l	363	290	436	36.50	73.00	Jaffe rate blanked
	mg/dl	4.10	3.28	4.92	0.41	0.82	
µmol/l	385	308	462	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)	
mg/dl	4.35	3.48	5.22	0.44	0.87		
gamma-GT	U/l	164	139	189	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	129	110	148	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	86	116	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	170	144	196	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	134	113	155	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	105	89	121	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	187	159	215	14.00	28.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	147	125	169	11.00	22.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	115	98	132	8.50	17.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.8	13.5	18.1	1.15	2.30	Glucose oxidase
mg/dl	285	243	327	21.00	42.00		
HDL - Cholesterol	mmol/l	2.02	1.72	2.32	0.15	0.30	Direct HDL Immunoseparation
	mg/dl	78.0	66.4	89.6	5.80	11.60	
	mmol/l	2.43	2.06	2.80	0.19	0.37	Direct HDL PEGME
	mg/dl	93.8	79.5	108	7.15	14.30	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.68	2.28	3.08	0.20	0.40	Direct HDL Roche 3rd generation
	mg/dl	103	88.0	118	7.50	15.00	
Iron	µmol/l	36.0	29.5	42.5	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	165	237	18.00	36.00	
LD (LDH)	U/l	732	622	842	55.00	110.00	P->L German methods 37°C
	U/l	529	449	609	40.00	80.00	P->L German methods 30°C
	U/l	371	315	427	28.00	56.00	P->L German methods 25°C
	U/l	373	317	429	28.00	56.00	L->P IFCC 37°C
	U/l	269	229	309	20.00	40.00	L->P IFCC 30°C
	U/l	189	161	217	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	57	46	68	5.50	11.00	Roche Colorimetric 37°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	2.31	1.97	2.65	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.16	6.11	8.21	0.53	1.05	
Potassium	mmol/l	6.43	5.92	6.94	0.26	0.51	ISE method - indirect
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	163	154	172	4.50	9.00	ISE method - indirect
TIBC	µmol/l	46.9	37.1	56.7	4.90	9.80	Direct Colorimetric
	µg/dl	262	207	317	27.50	55.00	
Triglycerides	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	245	206	284	19.50	39.00	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.73	2.29	3.17	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	242	203	281	19.50	39.00	
	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	255	214	296	20.50	41.00	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease end point
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
mg/dl	56.4	47.9	64.9	4.25	8.50		
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.24	8.05	10.4	0.60	1.19	
	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		

ILab 600®/650®/Aries/Taurus

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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	320	272	368	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	249	212	286	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	204	174	234	15.00	30.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	79	63	95	8.00	16.00	Tris buffer without P5P 25°C
Amylase Total	U/l	310	264	356	23.00	46.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	98	78	118	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.11	0.878	1.34	0.12	0.23	
Bilirubin Total	µmol/l	94.9	74.9	115	10.00	20.00	Diazo with Sulphanilic Acid
	mg/dl	5.55	4.38	6.72	0.59	1.17	
	µmol/l	94.6	74.7	115	9.95	19.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.53	4.37	6.69	0.58	1.16	
Calcium	mmol/l	3.03	2.73	3.33	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect

ILab 600®/650®/Aries/Taurus

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	6.82	5.93	7.71	0.45	0.89	Cholesterol Oxidase
	mg/dl	263	229	297	17.00	34.00	
Cholinesterase	U/l	5474	4379	6569	547.50	1095.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	441	362	520	39.50	79.00	CK-NAC (IFCC) 37°C
	U/l	276	227	325	24.50	49.00	CK-NAC (IFCC) 30°C
	U/l	187	154	220	16.50	33.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	369	295	443	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.17	3.33	5.01	0.42	0.84	
	µmol/l	406	325	487	40.50	81.00	Creatinine PAP method
	mg/dl	4.59	3.67	5.51	0.46	0.92	
	µmol/l	367	294	440	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.15	3.32	4.98	0.42	0.83	
gamma-GT	U/l	162	138	186	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	109	147	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	100	85	115	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	163	139	187	12.00	24.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	128	110	146	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	101	86	116	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.05	1.74	2.36	0.16	0.31	Direct HDL Immunoseparation
	mg/dl	79.1	67.2	91.0	5.95	11.90	
Iron	µmol/l	35.1	28.8	41.4	3.15	6.30	Colorimetric with ppt.
	µg/dl	196	161	231	17.50	35.00	

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	35.6	29.2	42.0	3.20	6.40	Colorimetric without ppt.
	µg/dl	199	163	235	18.00	36.00	
LD (LDH)	U/l	732	622	842	55.00	110.00	P->L German methods 37°C
	U/l	529	449	609	40.00	80.00	P->L German methods 30°C
	U/l	371	315	427	28.00	56.00	P->L German methods 25°C
	U/l	740	629	851	55.50	111.00	P->L SFBC 37°C
	U/l	534	454	614	40.00	80.00	P->L SFBC 30°C
	U/l	375	319	431	28.00	56.00	P->L SFBC 25°C
Lipase	U/l	73	59	87	7.00	14.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.64	1.45	1.83	0.10	0.19	Xylidyl Blue
	mg/dl	3.99	3.52	4.46	0.24	0.47	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Enzymatic
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.88	5.86	7.90	0.51	1.02	
Potassium	mmol/l	6.29	5.78	6.80	0.26	0.51	ISE method - indirect
Protein Total	g/l	46.1	36.8	55.4	4.65	9.30	Biuret reaction end point
	g/dl	4.61	3.68	5.54	0.47	0.93	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.89	2.43	3.35	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	256	215	297	20.50	41.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.58	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.67	7.54	9.80	0.57	1.13	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.06	7.88	10.2	0.59	1.18	

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

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.9	24.6	33.2	2.15	4.30	Bromocresol Green
	g/dl	2.89	2.46	3.32	0.22	0.43	
Alkaline Phosphatase	U/l	300	255	345	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	234	199	269	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	192	163	221	14.50	29.00	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	167	134	200	16.50	33.00	Tris buffer without P5P 37°C
	U/l	113	91	135	11.00	22.00	Tris buffer without P5P 30°C
	U/l	79	64	94	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	89.3	70.5	108	9.40	18.80	Diazo with Sulphanilic Acid
	mg/dl	5.22	4.12	6.32	0.55	1.10	
	µmol/l	83.8	66.2	101	8.80	17.60	Nitrobenzenediazonium salt
	mg/dl	4.90	3.87	5.93	0.52	1.03	
Calcium	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	104	124	5.00	10.00	Colorimetric
	mmol/l	117	108	126	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.92	6.02	7.82	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	232	302	17.50	35.00	

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

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	524	430	618	47.00	94.00	CK-NAC (IFCC) 37°C
	U/l	328	269	387	29.50	59.00	CK-NAC (IFCC) 30°C
	U/l	223	183	263	20.00	40.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	372	297	447	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.20	3.36	5.04	0.42	0.84	
	µmol/l	401	321	481	40.00	80.00	Enzymatic UV method
	mg/dl	4.53	3.63	5.43	0.45	0.90	
	µmol/l	407	325	489	41.00	82.00	Creatinine PAP method
	mg/dl	4.60	3.67	5.53	0.47	0.93	
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	137	117	157	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Hexokinase
	mg/dl	288	245	331	21.50	43.00	
	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	2.61	2.22	3.00	0.20	0.39	Direct HDL PPD
	mg/dl	101	85.7	116	7.65	15.30	
	mmol/l	2.73	2.32	3.14	0.21	0.41	Direct HDL PEGME
	mg/dl	105	89.6	120	7.70	15.40	
Iron	µmol/l	37.4	30.7	44.1	3.35	6.70	Colorimetric without ppt.
	µg/dl	209	172	246	18.50	37.00	
LD (LDH)	U/l	375	319	431	28.00	56.00	L->P IFCC 37°C
	U/l	271	230	312	20.50	41.00	L->P IFCC 30°C
	U/l	190	162	218	14.00	28.00	L->P IFCC 25°C

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

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.61	1.42	1.80	0.10	0.19	Xylidyl Blue
	mg/dl	3.91	3.45	4.37	0.23	0.46	
Phosphate Inorganic	mmol/l	2.35	1.99	2.71	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.29	6.17	8.41	0.56	1.12	
	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	6.23	5.73	6.73	0.25	0.50	ISE method - direct
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	
Sodium	mmol/l	158	150	166	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.85	2.39	3.31	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	252	212	292	20.00	40.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease end point
	mg/dl	117	99.2	135	8.90	17.80	
	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	0.65	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.59	8.35	10.8	0.62	1.24	
	mmol/l	0.53	0.46	0.60	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.95	7.78	10.1	0.59	1.17	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.58	8.33	10.8	0.63	1.25	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	404	319	489	42.50	85.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	305	241	369	32.00	64.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	229	181	277	24.00	48.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	25.3	17.0	33.6	4.15	8.30	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Green
	g/dl	2.93	2.49	3.37	0.22	0.44	
	g/l	27.9	23.7	32.1	2.10	4.20	Bromocresol Purple
	g/dl	2.79	2.37	3.21	0.21	0.42	
	g/l	27.6	23.5	31.7	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.76	2.35	3.17	0.21	0.41	
	g/l	29.1	24.7	33.5	2.20	4.40	Turbidimetric Assays
g/dl	2.91	2.47	3.35	0.22	0.44		
Alkaline Phosphatase	U/l	229	195	263	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	414	352	476	31.00	62.00	Diethanolamine buffer DEA 37°C
	U/l	323	274	372	24.50	49.00	Diethanolamine buffer DEA 30°C
	U/l	265	225	305	20.00	40.00	Diethanolamine buffer DEA 25°C
	U/l	321	272	370	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	250	212	288	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	205	174	236	15.50	31.00	AMP optimised to IFCC 25°C
	U/l	316	268	364	24.00	48.00	AMP non-optimised 37°C
	U/l	246	209	283	18.50	37.00	AMP non-optimised 30°C
U/l	202	171	233	15.50	31.00	AMP non-optimised 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	141	113	169	14.00	28.00	Colorimetric 37°C
	U/l	104	84	124	10.00	20.00	Colorimetric 30°C
	U/l	79	64	94	7.50	15.00	Colorimetric 25°C
	U/l	156	125	187	15.50	31.00	Ortho Vitros Microslide Systems 37°C
	U/l	179	143	215	18.00	36.00	Tris buffer with P5P 37°C
	U/l	132	106	158	13.00	26.00	Tris buffer with P5P 30°C
	U/l	101	81	121	10.00	20.00	Tris buffer with P5P 25°C
	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
	U/l	141	113	169	14.00	28.00	Tris buffer SCE 37°C
	U/l	104	84	124	10.00	20.00	Tris buffer SCE 30°C
U/l	79	64	94	7.50	15.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	259	220	298	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	256	218	294	19.00	38.00	Roche EPS Liquid 37°C
	U/l	301	256	346	22.50	45.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	290	247	333	21.50	43.00	pNP Maltotriose substrates 37°C
	U/l	287	244	330	21.50	43.00	Siemens - blocked pNPG7 37°C
	U/l	290	247	333	21.50	43.00	bioMerieux - blocked pNPG7 37°C
	U/l	234	199	269	17.50	35.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	312	265	359	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	299	254	344	22.50	45.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	314	267	361	23.50	47.00	Siemens - maltopenta/hexaoside 37°C
	U/l	292	248	336	22.00	44.00	Siemens 2-chloro-pNP linked substrate 37°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	281	239	323	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	178	151	205	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	272	231	313	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	275	233	317	21.00	42.00	Roche liquid stable pNPG7 37°C
	U/l	349	297	401	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
	U/l	289	246	332	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	296	251	341	22.50	45.00	Beckman Synchron AMY7 37°C
	U/l	310	264	356	23.00	46.00	I.L. 2-chloro-pNPG3 37°C
	U/l	343	292	394	25.50	51.00	Abbott Architect IFCC Cal. 37°C
	U/l	325	276	374	24.50	49.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	293	249	337	22.00	44.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	282	240	324	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	0.92	0.75	1.08	0.08	0.17	Immunoturbidimetric
	mg/dl	91.9	75.4	108	8.25	16.50	
Apolipoprotein B	g/l	0.60	0.49	0.71	0.05	0.11	Immunoturbidimetric
	mg/dl	59.9	49.1	70.7	5.40	10.80	
AST (GOT)	U/l	149	119	179	15.00	30.00	Colorimetric 37°C
	U/l	101	80	122	10.50	21.00	Colorimetric 30°C
	U/l	71	57	85	7.00	14.00	Colorimetric 25°C
	U/l	198	158	238	20.00	40.00	Ortho Vitros Microslide visible slide 37°C
	U/l	244	195	293	24.50	49.00	Tris buffer with P5P 37°C
	U/l	165	132	198	16.50	33.00	Tris buffer with P5P 30°C
	U/l	116	93	139	11.50	23.00	Tris buffer with P5P 25°C
	U/l	152	121	183	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	72	58	86	7.00	14.00	Tris buffer without P5P 25°C	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	149	119	179	15.00	30.00	Tris buffer SCE 37°C
	U/l	101	80	122	10.50	21.00	Tris buffer SCE 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	17.0	13.5	20.5	1.75	3.50	Colorimetric
	mmol/l	19.2	15.2	23.2	2.00	4.00	Ortho Vitros Microslide Systems
	mmol/l	18.0	14.3	21.7	1.85	3.70	Differential rate pH change
	mmol/l	17.9	14.2	21.6	1.85	3.70	Enzymatic
	mmol/l	18.1	14.4	21.8	1.85	3.70	Ion selective electrode
Bile Acids	µmol/l	50.0	40.0	60.0	5.00	10.00	4th Generation Colorimetric
	µmol/l	49.4	39.5	59.3	4.95	9.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	27.9	22.0	33.8	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	
	µmol/l	32.2	25.4	39.0	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.88	1.49	2.27	0.20	0.39	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	31.8	25.1	38.5	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.86	1.47	2.25	0.20	0.39	
Bilirubin Total	µmol/l	84.9	67.1	103	8.90	17.80	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.97	3.93	6.01	0.52	1.04	
	µmol/l	86.6	68.4	105	9.10	18.20	Vitros 250/500/700/950 Total BUBC
	mg/dl	5.07	4.00	6.14	0.54	1.07	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	106	83.7	128	11.15	22.30	Diazo with Dichloroaniline (DCA)
	mg/dl	6.20	4.90	7.50	0.65	1.30	
	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	87.0	68.7	105	9.15	18.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.09	4.02	6.16	0.54	1.07	
	µmol/l	87.2	68.9	106	9.15	18.30	Nitrobenzenediazonium salt
	mg/dl	5.10	4.03	6.17	0.54	1.07	
	µmol/l	86.5	68.4	105	9.05	18.10	Diazonium ion
	mg/dl	5.06	4.00	6.12	0.53	1.06	
	µmol/l	101	79.5	123	10.75	21.50	Oxidation to Biliverdin/Vanadate
	mg/dl	5.91	4.65	7.17	0.63	1.26	
	µmol/l	107	84.5	130	11.25	22.50	Modified Jendrassik
	mg/dl	6.26	4.94	7.58	0.66	1.32	
Calcium	mmol/l	2.97	2.67	3.27	0.15	0.30	Cresolphthalein complexone
	mg/dl	11.9	10.7	13.1	0.60	1.20	
	mmol/l	3.00	2.70	3.30	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	mmol/l	2.92	2.63	3.21	0.15	0.29	Ion selective electrode
	mg/dl	11.7	10.5	12.9	0.60	1.20	
	mmol/l	2.95	2.66	3.24	0.15	0.29	Methylthymol blue
	mg/dl	11.8	10.7	12.9	0.55	1.10	
	mmol/l	2.99	2.69	3.29	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	mmol/l	2.96	2.66	3.26	0.15	0.30	Phosphonazo
	mg/dl	11.9	10.7	13.1	0.60	1.20	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	3.00	2.70	3.30	0.15	0.30	NM-BAPTA
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	mmol/l	1.11	1.00	1.22	0.06	0.11	Ionised calcium
	mg/dl	4.45	4.00	4.90	0.23	0.45	
Chloride	mmol/l	113	104	122	4.50	9.00	Colorimetric
	mmol/l	116	107	125	4.50	9.00	Ortho Vitros Microslide Systems
	mmol/l	115	106	124	4.50	9.00	ISE indirect
	mmol/l	115	106	124	4.50	9.00	ISE direct
	mmol/l	129	119	139	5.00	10.00	Optical Fluorescence
Cholesterol	mmol/l	6.45	5.61	7.29	0.42	0.84	Ortho Vitros Microslide Systems
	mg/dl	249	217	281	16.00	32.00	
	mmol/l	6.93	6.03	7.83	0.45	0.90	Cholesterol Oxidase
	mg/dl	267	233	301	17.00	34.00	
	mmol/l	6.98	6.07	7.89	0.46	0.91	Cholesterol Dehydrogenase
mg/dl	269	234	304	17.50	35.00		
Cholinesterase	U/l	5555	4444	6666	555.50	1111.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	416	341	491	37.50	75.00	Ortho Vitros Microslide Systems 37°C
	U/l	504	413	595	45.50	91.00	CK-NAC serum start (DGKC) 37°C
	U/l	316	259	373	28.50	57.00	CK-NAC serum start (DGKC) 30°C
	U/l	214	176	252	19.00	38.00	CK-NAC serum start (DGKC) 25°C
	U/l	489	401	577	44.00	88.00	CK-NAC substrate start (DGKC) 37°C
	U/l	306	251	361	27.50	55.00	CK-NAC substrate start (DGKC) 30°C
	U/l	208	170	246	19.00	38.00	CK-NAC substrate start (DGKC) 25°C
	U/l	497	407	587	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	311	255	367	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	514	422	606	46.00	92.00	Monothioglycerol 37°C
	U/l	322	264	380	29.00	58.00	Monothioglycerol 30°C
	U/l	218	179	257	19.50	39.00	Monothioglycerol 25°C
	U/l	474	389	559	42.50	85.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	297	244	350	26.50	53.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	201	165	237	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	32.7	26.2	39.2	3.25	6.50	Atomic absorption
	µg/dl	208	167	249	20.50	41.00	
	µmol/l	30.6	24.5	36.7	3.05	6.10	Colorimetric
	µg/dl	195	156	234	19.50	39.00	
Cortisol	nmol/l	946	710	1182	118.00	236.00	Roche Cobas E411
	µg/dl	34.1	25.6	42.6	4.25	8.50	
Creatinine	µmol/l	368	295	441	36.50	73.00	Alkaline picrate with deproteinization
	mg/dl	4.16	3.33	4.99	0.42	0.83	
	µmol/l	376	301	451	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	391	313	469	39.00	78.00	Enzymatic UV method
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	388	310	466	39.00	78.00	Creatinine PAP method
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	390	312	468	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.41	3.53	5.29	0.44	0.88	



MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	381	305	457	38.00	76.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.31	3.45	5.17	0.43	0.86	
	µmol/l	384	307	461	38.50	77.00	Vitros IDMS Traceable
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	387	310	464	38.50	77.00	IDMS traceable
	mg/dl	4.37	3.50	5.24	0.44	0.87	
D-3-Hydroxybutyrate	mmol/l	1.19	1.01	1.37	0.09	0.18	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.67	2.94	4.40	0.37	0.73	Immunoturbidimetric
	ng/ml	2.87	2.30	3.44	0.29	0.57	
Folate	nmol/l	14.5	11.0	18.0	1.75	3.50	Roche Cobas E411
	ng/ml	6.39	4.85	7.93	0.77	1.54	
Free T4	pmol/l	48.5	36.4	60.6	6.05	12.10	Abbott Architect
	ng/dl	3.78	2.84	4.72	0.47	0.94	
	pg/ml	37.8	28.4	47.2	4.70	9.40	Abbott Architect
	pmol/l	69.6	52.2	87.0	8.70	17.40	Siemens Centaur XP/XPT/Classic
	ng/dl	5.43	4.07	6.79	0.68	1.36	
	pg/ml	54.3	40.7	67.9	6.80	13.60	Siemens Centaur XP/XPT/Classic
	pmol/l	66.7	50.0	83.4	8.35	16.70	Siemens Immulite 2000/2500
	ng/dl	5.20	3.90	6.50	0.65	1.30	
	pg/ml	52.0	39.0	65.0	6.50	13.00	Siemens Immulite 2000/2500
	pmol/l	72.3	54.2	90.4	9.05	18.10	Siemens Immulite 1000
	ng/dl	5.64	4.23	7.05	0.71	1.41	
	pg/ml	56.4	42.3	70.5	7.05	14.10	Siemens Immulite 1000
	pmol/l	63.9	47.9	79.9	8.00	16.00	Beckman Dxl800
ng/dl	4.98	3.74	6.22	0.62	1.24		
pg/ml	49.8	37.4	62.2	6.20	12.40	Beckman Dxl800	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	58.8	44.1	73.5	7.35	14.70	Beckman Access
	ng/dl	4.59	3.44	5.74	0.58	1.15	
	pg/ml	45.9	34.4	57.4	5.75	11.50	Beckman Access
	pmol/l	76.6	57.4	95.8	9.60	19.20	Tosoh Series
	ng/dl	5.97	4.48	7.46	0.75	1.49	
	pg/ml	59.7	44.8	74.6	7.45	14.90	Tosoh Series
	pmol/l	89.5	67.1	112	11.20	22.40	Vitros ECi
	ng/dl	6.98	5.23	8.73	0.88	1.75	
	pg/ml	69.8	52.3	87.3	8.75	17.50	Vitros ECi
	pmol/l	77.6	58.2	97.0	9.70	19.40	Roche Cobas E411
	ng/dl	6.05	4.54	7.56	0.76	1.51	
	pg/ml	60.5	45.4	75.6	7.55	15.10	Roche Cobas E411
	pmol/l	72.6	54.5	90.7	9.05	18.10	Roche Cobas 6000/8000
	ng/dl	5.66	4.25	7.07	0.71	1.41	
	pg/ml	56.6	42.5	70.7	7.05	14.10	Roche Cobas 6000/8000
	pmol/l	72.0	54.0	90.0	9.00	18.00	Biomerieux Vidas FT4N Kit
	ng/dl	5.62	4.21	7.03	0.71	1.41	
	pg/ml	56.2	42.1	70.3	7.05	14.10	Biomerieux Vidas FT4N Kit
Gentamicin	pmol/l	78.0	58.5	97.5	9.75	19.50	Siemens Centaur CP
	ng/dl	6.08	4.56	7.60	0.76	1.52	
	pg/ml	60.8	45.6	76.0	7.60	15.20	Siemens Centaur CP
	μmol/l	18.5	14.8	22.2	1.85	3.70	Immunoturbidimetric
	μg/ml	8.84	7.07	10.6	0.89	1.77	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	166	141	191	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	131	111	151	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	87	117	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	215	183	247	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	147	125	169	11.00	22.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	116	99	133	8.50	17.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	91	77	105	7.00	14.00	Gamma glutamyl-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
	U/l	187	159	215	14.00	28.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	147	125	169	11.00	22.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l	115	98	132	8.50	17.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	31	24	38	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	24	18	30	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	259	220	298	19.50	39.00	
	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	15.3	13.0	17.6	1.15	2.30	Oxygen electrode
	mg/dl	276	234	318	21.00	42.00	
mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase	
mg/dl	281	238	324	21.50	43.00		

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.48	2.11	2.85	0.19	0.37	Direct HDL PPD
	mg/dl	95.7	81.4	110	7.15	14.30	
	mmol/l	2.40	2.04	2.76	0.18	0.36	Direct HDL Immunoseparation
	mg/dl	92.6	78.7	107	6.95	13.90	
	mmol/l	2.21	1.88	2.54	0.17	0.33	Vitros Magnetic HDL
	mg/dl	85.3	72.6	98.0	6.35	12.70	
	mmol/l	2.46	2.09	2.83	0.19	0.37	Direct Clearance Method
	mg/dl	95.0	80.7	109	7.15	14.30	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Vitros 5.1 FS microtip assay
	mg/dl	84.9	72.2	97.6	6.35	12.70	
	mmol/l	2.18	1.85	2.51	0.17	0.33	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	84.1	71.4	96.8	6.35	12.70	
	mmol/l	2.85	2.42	3.28	0.22	0.43	Direct HDL Roche 3rd generation
	mg/dl	110	93.4	127	8.30	16.60	
mmol/l	2.28	1.94	2.62	0.17	0.34	HDL - Ultra	
mg/dl	88.0	74.9	101	6.55	13.10		
mmol/l	3.08	2.62	3.54	0.23	0.46	Direct HDL Roche 4th Generation	
mg/dl	119	101	137	9.00	18.00		
Immunoglobulin A	g/l	1.78	1.34	2.22	0.22	0.44	Immunoturbidimetric
	mg/dl	178	134	222	22.00	44.00	
Immunoglobulin G	g/l	7.02	5.76	8.28	0.63	1.26	Immunoturbidimetric
	mg/dl	702	576	828	63.00	126.00	
Immunoglobulin M	g/l	0.74	0.59	0.89	0.07	0.15	Immunoturbidimetric
	mg/dl	74.0	59.2	88.8	7.40	14.80	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	36.5	30.0	43.0	3.25	6.50	Colorimetric without ppt.
	µg/dl	204	168	240	18.00	36.00	
	µmol/l	35.7	29.3	42.1	3.20	6.40	Ortho Vitros Microslide Systems
	µg/dl	200	164	236	18.00	36.00	
Lactate	mmol/l	5.66	4.64	6.68	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	51.0	41.8	60.2	4.60	9.20	
	mmol/l	5.23	4.29	6.17	0.47	0.94	Ortho Vitros Microslide Systems
	mg/dl	47.1	38.7	55.5	4.20	8.40	
	mmol/l	5.30	4.35	6.25	0.48	0.95	Ion selective electrode
	mg/dl	47.8	39.2	56.4	4.30	8.60	
	mmol/l	5.84	4.79	6.89	0.53	1.05	UV LDH
	mg/dl	52.6	43.2	62.0	4.70	9.40	
LAP	U/l	15	13	17	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	972	826	1118	73.00	146.00	Ortho Vitros Microslide Systems 37°C
	U/l	345	293	397	26.00	52.00	L->P 37°C
	U/l	249	212	286	18.50	37.00	L->P 30°C
	U/l	175	149	201	13.00	26.00	L->P 25°C
	U/l	743	631	855	56.00	112.00	P->L Scandinavian & Dutch 37°C
	U/l	536	456	616	40.00	80.00	P->L Scandinavian & Dutch 30°C
	U/l	377	320	434	28.50	57.00	P->L Scandinavian & Dutch 25°C
	U/l	730	620	840	55.00	110.00	P->L German methods 37°C
	U/l	527	448	606	39.50	79.00	P->L German methods 30°C
	U/l	370	314	426	28.00	56.00	P->L German methods 25°C

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	716	609	823	53.50	107.00	P->L SFBC 37°C
	U/l	517	440	594	38.50	77.00	P->L SFBC 30°C
	U/l	363	309	417	27.00	54.00	P->L SFBC 25°C
	U/l	376	320	432	28.00	56.00	L->P IFCC 37°C
	U/l	271	231	311	20.00	40.00	L->P IFCC 30°C
	U/l	191	162	220	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	728	584	872	72.00	144.00	Ortho Vitros Microslide Systems 37°C
	U/l	59	47	71	6.00	12.00	Roche Colorimetric 37°C
	U/l	410	329	491	40.50	81.00	Randox Turbidimetric with colipase 37°C
	U/l	89	71	107	9.00	18.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.47	2.18	2.76	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.72	1.51	1.93	0.11	0.21	
	mmol/l	2.15	1.89	2.41	0.13	0.26	Flame photometry
	mg/dl	1.49	1.31	1.67	0.09	0.18	
	mmol/l	2.16	1.90	2.42	0.13	0.26	Ion selective electrode
	mg/dl	1.50	1.32	1.68	0.09	0.18	
	mmol/l	2.12	1.87	2.37	0.13	0.25	Spectrophotometric
	mg/dl	1.47	1.30	1.64	0.09	0.17	
mmol/l	2.15	1.89	2.41	0.13	0.26	Randox Colorimetric	
mg/dl	1.49	1.31	1.67	0.09	0.18		
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Arsenazo III
	mg/dl	4.06	3.57	4.55	0.25	0.49	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.20	3.69	4.71	0.26	0.51	
	mmol/l	1.68	1.48	1.88	0.10	0.20	Atomic absorption
	mg/dl	4.08	3.60	4.56	0.24	0.48	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	1.63	1.44	1.82	0.10	0.19	Calmagite
	mg/dl	3.96	3.50	4.42	0.23	0.46	
	mmol/l	1.71	1.50	1.92	0.11	0.21	Xylidyl Blue
	mg/dl	4.16	3.65	4.67	0.26	0.51	
	mmol/l	1.70	1.49	1.91	0.11	0.21	Methylthymol blue
	mg/dl	4.13	3.62	4.64	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	
mmol/l	1.67	1.47	1.87	0.10	0.20	Enzymatic	
mg/dl	4.06	3.57	4.55	0.25	0.49		
NEFA	mmol/l	0.36	0.31	0.41	0.03	0.05	Colorimetric
Osmolality	mOsm/kg	353	282	424	35.50	71.00	Calculated
	mOsm/kg	385	308	462	38.50	77.00	Freezing point depression
Paracetamol	mmol/l	0.62	0.50	0.74	0.06	0.12	Colorimetric
	mg/l	93.7	74.9	113	9.40	18.80	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	6.98	5.92	8.04	0.53	1.06	
	mmol/l	2.28	1.93	2.63	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.07	5.98	8.16	0.55	1.09	
	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	6.29	5.79	6.79	0.25	0.50	Ortho Vitros Microslide Systems
	mmol/l	6.48	5.96	7.00	0.26	0.52	Enzymatic
	mmol/l	6.16	5.66	6.66	0.25	0.50	Flame photometry

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	6.25	5.75	6.75	0.25	0.50	ISE method - direct
	mmol/l	6.35	5.84	6.86	0.26	0.51	ISE method - indirect
	mmol/l	6.53	6.01	7.05	0.26	0.52	Optical Fluorescence
	mmol/l	5.53	5.09	5.97	0.22	0.44	Colorimetric
Protein Total	g/l	45.7	36.5	54.9	4.60	9.20	Ortho Vitros Microslide Systems
	g/dl	4.57	3.65	5.49	0.46	0.92	
	g/l	45.8	36.7	54.9	4.55	9.10	Biuret reaction end point
	g/dl	4.58	3.67	5.49	0.46	0.91	
	g/l	44.5	35.6	53.4	4.45	8.90	Biuret reaction kinetic
	g/dl	4.45	3.56	5.34	0.45	0.89	
PSA Total	ng/ml =	21.1	15.8	26.4	2.65	5.30	Tosoh Series
	ng/ml =	26.2	19.6	32.8	3.30	6.60	Siemens Immulite 1000
	ng/ml =	30.4	22.8	38.0	3.80	7.60	Roche Elecsys Modular E170
	ng/ml =	29.1	21.8	36.4	3.65	7.30	Beckman Access standardised to Hybritech
	ng/ml =	29.0	21.7	36.3	3.65	7.30	bioMerieux VIDAS TPSA
	ng/ml =	26.4	19.8	33.0	3.30	6.60	Siemens Centaur XP/XPT/Classic
	ng/ml =	29.9	22.5	37.3	3.70	7.40	Siemens Immulite 2000 1st Generation
	ng/ml =	25.2	18.9	31.5	3.15	6.30	Abbott Architect
	ng/ml =	30.5	22.9	38.1	3.80	7.60	Cobas E411
	ng/ml =	30.3	22.7	37.9	3.80	7.60	Roche Cobas 6000/8000
	ng/ml =	28.1	21.1	35.1	3.50	7.00	Ortho Vitros 3600/5600/ECi PSA II
	ng/ml =	29.8	22.3	37.3	3.75	7.50	Beckman DXI standardised to Hybritech
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	158	150	166	4.00	8.00	Ortho Vitros Microslide Systems

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	160	152	168	4.00	8.00	Enzymatic
	mmol/l	158	150	166	4.00	8.00	Flame photometry
	mmol/l	159	151	167	4.00	8.00	ISE method - direct
	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
	mmol/l	160	152	168	4.00	8.00	Optical Fluorescence
	mmol/l	151	144	158	3.50	7.00	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 =	0.99	0.79	1.19	0.10	0.20	Abbott Architect
	µU/ml =	1.20	0.96	1.44	0.12	0.24	bioMerieux VIDAS TSH
	µU/ml =	1.22	0.98	1.46	0.12	0.24	Siemens Immulite 2000/2500
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Siemens Immulite 1000
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Roche Elecsys
	µU/ml =	1.09	0.87	1.31	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 =	1.14	0.92	1.36	0.11	0.22	Vitros ECi
	µU/ml =	1.33	1.06	1.60	0.14	0.27	Roche Cobas E411
	µU/ml =	1.33	1.07	1.59	0.13	0.26	Roche Cobas 6000/8000
	µU/ml =	1.33	1.07	1.59	0.13	0.26	SNIBE Maglumi Analysers
	µU/ml =	1.06	0.85	1.27	0.11	0.21	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	40.8	32.3	49.3	4.25	8.50	Removal of excess free iron
	µg/dl	228	181	275	23.50	47.00	
	µmol/l	45.4	35.9	54.9	4.75	9.50	FE+UIBC(saturation with iron)
	µg/dl	254	201	307	26.50	53.00	
	µmol/l	41.8	33.0	50.6	4.40	8.80	Direct Colorimetric
	µg/dl	234	184	284	25.00	50.00	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	37.8	29.9	45.7	3.95	7.90	Calculated from Transferrin
	µg/dl	211	167	255	22.00	44.00	
	µmol/l	50.8	40.1	61.5	5.35	10.70	Randox Direct
	µg/dl	284	224	344	30.00	60.00	
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	3.24	2.43	4.05	0.41	0.81	Abbott Architect
	ng/ml	2.11	1.58	2.64	0.27	0.53	
	ng/dl	211	158	264	26.50	53.00	Abbott Architect
	nmol/l	4.31	3.24	5.38	0.54	1.07	BioMerieux Vidas
	ng/ml	2.81	2.11	3.51	0.35	0.70	
	ng/dl	281	211	351	35.00	70.00	BioMerieux Vidas
	nmol/l	5.02	3.77	6.27	0.63	1.25	Siemens Centaur XP/XPT/Classic
	ng/ml	3.27	2.45	4.09	0.41	0.82	
	ng/dl	327	245	409	41.00	82.00	Siemens Centaur XP/XPT/Classic
	nmol/l	4.11	3.08	5.14	0.52	1.03	Siemens Immulite 2000/2500
	ng/ml	2.68	2.01	3.35	0.34	0.67	
	ng/dl	268	201	335	33.50	67.00	Siemens Immulite 2000/2500
	nmol/l	3.59	2.69	4.49	0.45	0.90	Beckman Dxl800
	ng/ml	2.34	1.75	2.93	0.30	0.59	
	ng/dl	234	175	293	29.50	59.00	Beckman Dxl800
	nmol/l	4.34	3.25	5.43	0.55	1.09	Roche Elecsys
ng/ml	2.83	2.12	3.54	0.36	0.71		
ng/dl	283	212	354	35.50	71.00	Roche Elecsys	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	3.69	2.77	4.61	0.46	0.92	Beckman Access
	ng/ml	2.40	1.80	3.00	0.30	0.60	
	ng/dl	240	180	300	30.00	60.00	Beckman Access
	nmol/l	5.41	4.06	6.76	0.68	1.35	Vitros ECI
	ng/ml	3.52	2.64	4.40	0.44	0.88	
	ng/dl	352	264	440	44.00	88.00	Vitros ECI
	nmol/l	4.48	3.36	5.60	0.56	1.12	Roche Cobas E411
	ng/ml	2.92	2.19	3.65	0.37	0.73	
	ng/dl	292	219	365	36.50	73.00	Roche Cobas E411
	nmol/l	4.25	3.19	5.31	0.53	1.06	Roche Cobas 6000/8000
	ng/ml	2.77	2.08	3.46	0.35	0.69	
	ng/dl	277	208	346	34.50	69.00	Roche Cobas 6000/8000
	nmol/l	4.99	3.74	6.24	0.63	1.25	Siemens Centaur CP
	ng/ml	3.25	2.43	4.07	0.41	0.82	
	ng/dl	325	243	407	41.00	82.00	Siemens Centaur CP
Total T4	nmol/l	209	157	261	26.00	52.00	Abbott Architect
	µg/dl	16.3	12.2	20.4	2.05	4.10	
	ng/ml	163	122	204	20.50	41.00	Abbott Architect
	nmol/l	201	151	251	25.00	50.00	BioMerieux Vidas
	µg/dl	15.7	11.8	19.6	1.95	3.90	
	ng/ml	157	118	196	19.50	39.00	BioMerieux Vidas
	nmol/l	203	152	254	25.50	51.00	Siemens Centaur XP/XPT/Classic
	µg/dl	15.8	11.9	19.7	1.95	3.90	
	ng/ml	158	119	197	19.50	39.00	Siemens Centaur XP/XPT/Classic
	nmol/l	198	148	248	25.00	50.00	Siemens Immulite 2000/2500
	µg/dl	15.4	11.5	19.3	1.95	3.90	
	ng/ml	154	115	193	19.50	39.00	Siemens Immulite 2000/2500

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	223	167	279	28.00	56.00	Siemens Immulite 1000
	µg/dl	17.4	13.0	21.8	2.20	4.40	
	ng/ml	174	130	218	22.00	44.00	Siemens Immulite 1000
	nmol/l	191	143	239	24.00	48.00	Roche Elecsys
	µg/dl	14.9	11.2	18.6	1.85	3.70	
	ng/ml	149	112	186	18.50	37.00	Roche Elecsys
	nmol/l	249	187	311	31.00	62.00	Beckman Access
	µg/dl	19.4	14.6	24.2	2.40	4.80	
	ng/ml	194	146	242	24.00	48.00	Beckman Access
	nmol/l	211	158	264	26.50	53.00	Tosoh Series
	µg/dl	16.5	12.3	20.7	2.10	4.20	
	ng/ml	165	123	207	21.00	42.00	Tosoh Series
	nmol/l	218	164	272	27.00	54.00	Vitros ECI
	µg/dl	17.0	12.8	21.2	2.10	4.20	
	ng/ml	170	128	212	21.00	42.00	Vitros ECI
	nmol/l	185	139	231	23.00	46.00	Roche Cobas E411
	µg/dl	14.4	10.8	18.0	1.80	3.60	
	ng/ml	144	108	180	18.00	36.00	Roche Cobas E411
	nmol/l	178	133	223	22.50	45.00	Roche Cobas 6000/8000
	µg/dl	13.9	10.4	17.4	1.75	3.50	
ng/ml	139	104	174	17.50	35.00	Roche Cobas 6000/8000	
nmol/l	221	165	277	28.00	56.00	Siemens Centaur CP	
µg/dl	17.2	12.9	21.5	2.15	4.30		
ng/ml	172	129	215	21.50	43.00	Siemens Centaur CP	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Transferrin	g/l	1.66	1.33	1.99	0.17	0.33	Immunoturbidimetric
	mg/dl	166	133	199	16.50	33.00	
Triglycerides	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.78	2.34	3.22	0.22	0.44	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	246	207	285	19.50	39.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	248	208	288	20.00	40.00	
mmol/l	3.16	2.66	3.66	0.25	0.50	Ortho Vitros Microslide Systems	
mg/dl	280	235	325	22.50	45.00		
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Ortho Vitros Microslide Systems
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease end point
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.7	16.8	22.6	1.45	2.90	Urease kinetic
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	19.0	16.2	21.8	1.40	2.80	Urease hypochlorite
	mg/dl	114	97.4	131	8.30	16.60	
	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	

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.70	7.58	9.82	0.56	1.12	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	8.15	10.6	0.61	1.22	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	
mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290	
mg/dl	9.21	8.01	10.4	0.60	1.20		
Uricase Peroxidase with ascorbate oxidase @ 546nm	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	201	161	241	20.00	40.00	Roche Cobas E411
	pg/ml	272	218	326	27.00	54.00	
Zinc	µmol/l	36.7	29.4	44.0	3.65	7.30	Colorimetric with deproteinisation
	µg/dl	240	192	288	24.00	48.00	

**MEAN OF ALL INSTRUMENTS (Elec.)**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		62.8	56.6	69.0	3.10	6.20	% of total Protein (Beckman Capillary)
alpha-1-globulin		6.0	4.6	7.4	0.72	1.44	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.1	5.4	8.8	0.85	1.70	% of total Protein (Beckman Capillary)
beta-globulin		12.2	9.3	15.1	1.47	2.93	% of total Protein (Beckman Capillary)
gamma-globulin		11.9	9.0	14.8	1.43	2.86	% of total Protein (Beckman Capillary)

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	30.3	25.8	34.8	2.25	4.50	Bromocresol Green
	g/dl	3.03	2.58	3.48	0.23	0.45	
Alkaline Phosphatase	U/l	325	276	374	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	253	215	291	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	208	176	240	16.00	32.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	156	125	187	15.50	31.00	Tris buffer without P5P 37°C
	U/l	115	93	137	11.00	22.00	Tris buffer without P5P 30°C
	U/l	88	70	106	9.00	18.00	Tris buffer without P5P 25°C
Amylase Total	U/l	295	251	339	22.00	44.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	19.3	15.3	23.3	2.00	4.00	Enzymatic
Bilirubin Total	µmol/l	87.9	69.5	106	9.20	18.40	Diazo with Dichloroaniline (DCA)
	mg/dl	5.14	4.07	6.21	0.54	1.07	
	µmol/l	94.2	74.4	114	9.90	19.80	Diazo with Sulphanilic Acid
	mg/dl	5.51	4.35	6.67	0.58	1.16	
	µmol/l	93.5	73.8	113	9.85	19.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.47	4.32	6.62	0.58	1.15	
µmol/l	97.0	76.7	117	10.15	20.30	Oxidation to Biliverdin/Vanadate	
mg/dl	5.67	4.49	6.85	0.59	1.18		

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Calcium	mmol/l	2.97	2.67	3.27	0.15	0.30	Cresolphthalein complexone	
	mg/dl	11.9	10.7	13.1	0.60	1.20		
	mmol/l	3.00	2.70	3.30	0.15	0.30	Arsenazo III	
	mg/dl	12.0	10.8	13.2	0.60	1.20		
Cholesterol	mmol/l	6.97	6.06	7.88	0.46	0.91	Cholesterol Oxidase	
	mg/dl	269	234	304	17.50	35.00		
CK Total	U/l	502	412	592	45.00	90.00	CK-NAC (IFCC) 37°C	
	U/l	314	258	370	28.00	56.00	CK-NAC (IFCC) 30°C	
	U/l	213	175	251	19.00	38.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	359	288	430	35.50	71.00	Alkaline picrate with deproteinization	
	mg/dl	4.06	3.25	4.87	0.41	0.81		
	µmol/l	364	291	437	36.50	73.00	Alkaline picrate no deproteinization	
	mg/dl	4.11	3.29	4.93	0.41	0.82		
	µmol/l	355	284	426	35.50	71.00	Creatinine PAP method	
	mg/dl	4.01	3.21	4.81	0.40	0.80		
	µmol/l	359	287	431	36.00	72.00	Jaffe rate blanked	
	mg/dl	4.06	3.24	4.88	0.41	0.82		
	µmol/l	379	303	455	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	4.28	3.42	5.14	0.43	0.86		
	gamma-GT	U/l	168	142	194	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
		U/l	132	112	152	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
U/l		104	88	120	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
U/l		171	145	197	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
U/l		135	114	156	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C	
U/l		106	89	123	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.41	2.05	2.77	0.18	0.36	Direct HDL PPD
	mg/dl	93.0	79.1	107	6.95	13.90	
	mmol/l	2.35	2.00	2.70	0.18	0.35	Direct Clearance Method
	mg/dl	90.7	77.2	104	6.75	13.50	
	mmol/l	2.56	2.18	2.94	0.19	0.38	Vitros dHDL PTA/MgCl ₂ direct precipitation
	mg/dl	98.8	84.1	114	7.35	14.70	
Iron	mmol/l	1.75	1.48	2.02	0.14	0.27	HDL - Ultra
	mg/dl	67.6	57.1	78.1	5.25	10.50	
Iron	µmol/l	35.9	29.4	42.4	3.25	6.50	Colorimetric without ppt.
	µg/dl	201	164	238	18.50	37.00	
Lactate	mmol/l	5.37	4.40	6.34	0.49	0.97	Colorimetric Lactate Oxidase
	mg/dl	48.4	39.6	57.2	4.40	8.80	
LD (LDH)	U/l	711	604	818	53.50	107.00	P->L Scandinavian & Dutch 37°C
	U/l	513	436	590	38.50	77.00	P->L Scandinavian & Dutch 30°C
	U/l	360	306	414	27.00	54.00	P->L Scandinavian & Dutch 25°C
	U/l	368	313	423	27.50	55.00	L->P IFCC 37°C
	U/l	266	226	306	20.00	40.00	L->P IFCC 30°C
	U/l	187	159	215	14.00	28.00	L->P IFCC 25°C
Lipase	U/l	62	50	74	6.00	12.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Xylidyl Blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	2.16	1.84	2.48	0.16	0.32	Phosphomolybdate enzymatic
	mg/dl	6.70	5.70	7.70	0.50	1.00	
	mmol/l	2.13	1.81	2.45	0.16	0.32	Phosphomolybdate UV
	mg/dl	6.60	5.61	7.59	0.50	0.99	
Protein Total	g/l	47.9	38.3	57.5	4.80	9.60	Biuret reaction end point
	g/dl	4.79	3.83	5.75	0.48	0.96	
TIBC	µmol/l	44.8	35.4	54.2	4.70	9.40	FE+UIBC(saturation with iron)
	µg/dl	250	198	302	26.00	52.00	
Triglycerides	mmol/l	2.75	2.31	3.19	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	243	204	282	19.50	39.00	
	mmol/l	2.84	2.39	3.29	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	251	212	290	19.50	39.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.69	2.26	3.12	0.22	0.43	Lipase/Glycerol Dehydrogenase
	mg/dl	238	200	276	19.00	38.00	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.2	17.2	23.2	1.50	3.00	Urease hypochlorite
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	BUN
	mg/dl	55.9	47.5	64.3	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.55	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	0.55	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	

**MINDRAY BS-200/300/400**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

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	7.93	10.3	0.59	1.18	

Ortho VITROS®

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Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	27.6	23.5	31.7	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.76	2.35	3.17	0.21	0.41	
Alkaline Phosphatase	U/l	229	195	263	17.00	34.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	156	125	187	15.50	31.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	178	151	205	13.50	27.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	198	158	238	20.00	40.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	19.2	15.2	23.2	2.00	4.00	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	84.9	67.1	103	8.90	17.80	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.97	3.93	6.01	0.52	1.04	
	µmol/l	86.6	68.4	105	9.10	18.20	Vitros 250/500/700/950 Total BUBC
	mg/dl	5.07	4.00	6.14	0.54	1.07	
Bilirubin, Unconjugated Vitros BU	µmol/l	83.4	65.9	101	8.75	17.50	BuBc Vitros Slide
	mg/dl	4.88	3.86	5.90	0.51	1.02	
Calcium	mmol/l	3.00	2.70	3.30	0.15	0.30	Ortho Vitros Microslide Systems
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Chloride	mmol/l	116	107	125	4.50	9.00	Ortho Vitros Microslide Systems
	mg/dl	116	107	125	4.50	9.00	
Cholesterol	mmol/l	6.45	5.61	7.29	0.42	0.84	Ortho Vitros Microslide Systems
	mg/dl	249	217	281	16.00	32.00	
Cholinesterase	U/l	5250	4200	6300	525.00	1050.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	416	341	491	37.50	75.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	393	314	472	39.50	79.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	4.44	3.55	5.33	0.45	0.89	

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Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	384	307	461	38.50	77.00	Vitros IDMS Traceable
	mg/dl	4.34	3.47	5.21	0.44	0.87	
Free T4	pmol/l	89.5	67.1	112	11.20	22.40	Vitros ECi
	ng/dl	6.98	5.23	8.73	0.88	1.75	
	pg/ml	69.8	52.3	87.3	8.75	17.50	Vitros ECi
gamma-GT	U/l	215	183	247	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.4	12.2	16.6	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	259	220	298	19.50	39.00	
HDL - Cholesterol	mmol/l	2.21	1.88	2.54	0.17	0.33	Vitros Magnetic HDL
	mg/dl	85.3	72.6	98.0	6.35	12.70	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Vitros 5.1 FS microtip assay
	mg/dl	84.9	72.2	97.6	6.35	12.70	
	mmol/l	2.18	1.85	2.51	0.17	0.33	
mg/dl	84.1	71.4	96.8	6.35	12.70		
Iron	µmol/l	35.7	29.3	42.1	3.20	6.40	Ortho Vitros Microslide Systems
	µg/dl	200	164	236	18.00	36.00	
Lactate	mmol/l	5.23	4.29	6.17	0.47	0.94	Ortho Vitros Microslide Systems
	mg/dl	47.1	38.7	55.5	4.20	8.40	
LD (LDH)	U/l	972	826	1118	73.00	146.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	728	584	872	72.00	144.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	2.47	2.18	2.76	0.15	0.29	Ortho Vitros Microslide Systems
	mg/dl	1.72	1.51	1.93	0.11	0.21	
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.20	3.69	4.71	0.26	0.51	

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Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Ortho Vitros Microslide Systems
	mg/dl	6.98	5.92	8.04	0.53	1.06	
	mmol/l	2.22	1.89	2.55	0.17	0.33	Vitros DT60/DT60 II
	mg/dl	6.88	5.86	7.90	0.51	1.02	
Potassium	mmol/l	6.29	5.79	6.79	0.25	0.50	Ortho Vitros Microslide Systems
Protein Total	g/l	45.7	36.5	54.9	4.60	9.20	Ortho Vitros Microslide Systems
	g/dl	4.57	3.65	5.49	0.46	0.92	
PSA Total	ng/ml =	26.6	19.9	33.3	3.35	6.70	Ortho Vitros ECi
	ng/ml =	28.1	21.1	35.1	3.50	7.00	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	158	150	166	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.14	0.92	1.36	0.11	0.22	Vitros ECi
Total T3	nmol/l	5.41	4.06	6.76	0.68	1.35	Vitros ECi
	ng/ml	3.52	2.64	4.40	0.44	0.88	
	ng/dl	352	264	440	44.00	88.00	Vitros ECi
Total T4	nmol/l	218	164	272	27.00	54.00	Vitros ECi
	µg/dl	17.0	12.8	21.2	2.10	4.20	
	ng/ml	170	128	212	21.00	42.00	Vitros ECi
Triglycerides	mmol/l	3.16	2.66	3.66	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	280	235	325	22.50	45.00	
Urea	mmol/l	18.5	15.7	21.3	1.40	2.80	Ortho Vitros Microslide Systems
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.5	15.7	21.3	1.40	2.80	BUN
	mg/dl	51.9	44.1	59.7	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.52	0.45	0.59	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.70	7.58	9.82	0.56	1.12	

PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.8	25.3	34.3	2.25	4.50	Bromocresol Green
	g/dl	2.98	2.53	3.43	0.23	0.45	
Alkaline Phosphatase	U/l	413	351	475	31.00	62.00	Diethanolamine buffer DEA 37°C
	U/l	322	273	371	24.50	49.00	Diethanolamine buffer DEA 30°C
	U/l	264	224	304	20.00	40.00	Diethanolamine buffer DEA 25°C
	U/l	305	260	350	22.50	45.00	AMP optimised to IFCC 37°C
	U/l	238	203	273	17.50	35.00	AMP optimised to IFCC 30°C
	U/l	195	166	224	14.50	29.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	115	92	138	11.50	23.00	Tris buffer without P5P 30°C
	U/l	87	70	104	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	158	126	190	16.00	32.00	Tris buffer without P5P 37°C
	U/l	107	85	129	11.00	22.00	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	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Bilirubin Total	µmol/l	99.8	78.8	121	10.50	21.00	Diazo with Sulphanilic Acid
	mg/dl	5.84	4.61	7.07	0.62	1.23	
	µmol/l	96.9	76.5	117	10.20	20.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.67	4.48	6.86	0.60	1.19	
	µmol/l	107	84.4	130	11.30	22.60	Oxidation to Biliverdin/Vanadate
	mg/dl	6.26	4.94	7.58	0.66	1.32	

PRESTIGE 24i

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Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.96	2.67	3.25	0.15	0.29	Arsenazo III
	mg/dl	11.9	10.7	13.1	0.60	1.20	
Cholesterol	mmol/l	7.09	6.17	8.01	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
CK Total	U/l	547	449	645	49.00	98.00	CK-NAC serum start (DGKC) 37°C
	U/l	342	281	403	30.50	61.00	CK-NAC serum start (DGKC) 30°C
	U/l	232	191	273	20.50	41.00	CK-NAC serum start (DGKC) 25°C
	U/l	561	460	662	50.50	101.00	CK-NAC (IFCC) 37°C
	U/l	351	288	414	31.50	63.00	CK-NAC (IFCC) 30°C
	U/l	238	196	280	21.00	42.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	359	288	430	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.06	3.25	4.87	0.41	0.81	
gamma-GT	U/l	171	146	196	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	135	115	155	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	90	122	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	183	156	210	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	144	123	165	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	113	96	130	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	
Iron	µmol/l	39.3	32.2	46.4	3.55	7.10	Colorimetric without ppt.
	µg/dl	220	180	260	20.00	40.00	
LD (LDH)	U/l	756	642	870	57.00	114.00	P->L German methods 37°C
	U/l	546	464	628	41.00	82.00	P->L German methods 30°C
	U/l	383	325	441	29.00	58.00	P->L German methods 25°C

PRESTIGE 24i

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Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	1.58	1.39	1.77	0.10	0.19	Xylidyl Blue
	mg/dl	3.84	3.38	4.30	0.23	0.46	
Phosphate Inorganic	mmol/l	2.42	2.06	2.78	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.50	6.39	8.61	0.56	1.11	
Protein Total	g/l	47.7	38.2	57.2	4.75	9.50	Biuret reaction end point
	g/dl	4.77	3.82	5.72	0.48	0.95	
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	BUN
	mg/dl	55.9	47.5	64.3	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	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	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

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	30.6	26.0	35.2	2.30	4.60	Bromocresol Purple
	g/dl	3.06	2.60	3.52	0.23	0.46	
	g/l	28.4	24.1	32.7	2.15	4.30	Turbidimetric Assays
	g/dl	2.84	2.41	3.27	0.22	0.43	
Alkaline Phosphatase	U/l	265	225	305	20.00	40.00	Roche Integra AMP buffer 37°C
	U/l	206	175	237	15.50	31.00	Roche Integra AMP buffer 30°C
	U/l	169	144	194	12.50	25.00	Roche Integra AMP buffer 25°C
	U/l	264	224	304	20.00	40.00	AMP optimised to IFCC 37°C
	U/l	206	174	238	16.00	32.00	AMP optimised to IFCC 30°C
	U/l	169	143	195	13.00	26.00	AMP optimised to IFCC 25°C
	U/l	256	218	294	19.00	38.00	Colorimetric 37°C
	U/l	199	170	228	14.50	29.00	Colorimetric 30°C
	U/l	164	139	189	12.50	25.00	Colorimetric 25°C
ALT (GPT)	U/l	141	113	169	14.00	28.00	Tris buffer without P5P 37°C
	U/l	104	84	124	10.00	20.00	Tris buffer without P5P 30°C
	U/l	79	64	94	7.50	15.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	257	218	296	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	252	214	290	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	277	235	319	21.00	42.00	Randox Liquid Ethylidene pNPG7 37°C

Roche Cobas 6000 c501 e601

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Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	270	230	310	20.00	40.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	270	230	310	20.00	40.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	272	232	312	20.00	40.00	Roche liquid stable pNPG7 37°C
	U/l	277	236	318	20.50	41.00	BM/Roche Colorimetric pNPG7 37°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
Bicarbonate	mmol/l	17.1	13.5	20.7	1.80	3.60	Colorimetric
	mmol/l	17.2	13.6	20.8	1.80	3.60	Enzymatic
Bile Acids	µmol/l	47.7	38.2	57.2	4.75	9.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	31.4	24.8	38.0	3.30	6.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	µmol/l	31.6	25.0	38.2	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.85	1.46	2.24	0.20	0.39	
	µmol/l	31.2	24.7	37.7	3.25	6.50	Roche JG factored
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	31.1	24.6	37.6	3.25	6.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.82	1.44	2.20	0.19	0.38	
Bilirubin Total	µmol/l	87.4	69.1	106	9.15	18.30	Diazo with Dichloroaniline (DCA)
	mg/dl	5.11	4.04	6.18	0.54	1.07	
	µmol/l	85.6	67.6	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.01	3.95	6.07	0.53	1.06	
	µmol/l	85.6	67.6	104	9.00	18.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.01	3.95	6.07	0.53	1.06	
	µmol/l	85.7	67.7	104	9.00	18.00	Nitrobenzenediazonium salt
	mg/dl	5.01	3.96	6.06	0.53	1.05	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	85.4	67.5	103	8.95	17.90	Diazonium ion
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Calcium	mmol/l	2.99	2.69	3.29	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.0	10.8	13.2	0.60	1.20	
	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	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
	mg/dl	260	226	294	17.00	34.00	
Cholesterol	mmol/l	6.73	5.85	7.61	0.44	0.88	Cholesterol Oxidase
	mg/dl	260	226	294	17.00	34.00	
Cholinesterase	U/l	5471	4377	6565	547.00	1094.00	Colorimetric Benzoylcholine 37°C
	U/l	5413	4331	6495	541.00	1082.00	
CK Total	U/l	493	404	582	44.50	89.00	CK-NAC serum start (DGKC) 37°C
	U/l	309	253	365	28.00	56.00	CK-NAC serum start (DGKC) 30°C
	U/l	210	172	248	19.00	38.00	CK-NAC serum start (DGKC) 25°C
	U/l	480	394	566	43.00	86.00	CK-NAC substrate start (DGKC) 37°C
	U/l	300	247	353	26.50	53.00	CK-NAC substrate start (DGKC) 30°C
	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	485	398	572	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	304	249	359	27.50	55.00	CK-NAC (IFCC) 30°C
Creatinine	µmol/l	380	304	456	38.00	76.00	Alkaline picrate with deproteinization
	mg/dl	4.29	3.44	5.14	0.43	0.85	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	402	321	483	40.50	81.00	Enzymatic UV method
	mg/dl	4.54	3.63	5.45	0.46	0.91	
	µmol/l	398	318	478	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	395	316	474	39.50	79.00	Jaffe rate blanked
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	391	313	469	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	393	314	472	39.50	79.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	µmol/l	390	312	468	39.00	78.00	IDMS traceable
	mg/dl	4.41	3.53	5.29	0.44	0.88	
Free T4	pmol/l	72.6	54.5	90.7	9.05	18.10	Roche Cobas 6000/8000
	ng/dl	5.66	4.25	7.07	0.71	1.41	
	pg/ml	56.6	42.5	70.7	7.05	14.10	Roche Cobas 6000/8000
gamma-GT	U/l	163	139	187	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	110	146	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	86	116	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	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	13.3	17.9	1.15	2.30	Glucose dehydrogenase
	mg/dl	281	240	322	20.50	41.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.62	2.23	3.01	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	101	86.1	116	7.45	14.90	
	mmol/l	2.88	2.45	3.31	0.22	0.43	Direct HDL PEGME
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	2.88	2.45	3.31	0.22	0.43	Direct HDL Roche 3rd generation
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	3.05	2.59	3.51	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	118	100	136	9.00	18.00	
Iron	µmol/l	36.6	30.0	43.2	3.30	6.60	Colorimetric with ppt.
	µg/dl	205	168	242	18.50	37.00	
	µmol/l	36.4	29.9	42.9	3.25	6.50	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
Lactate	mmol/l	5.67	4.65	6.69	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	51.1	41.9	60.3	4.60	9.20	
LD (LDH)	U/l	378	321	435	28.50	57.00	L->P 37°C
	U/l	273	232	314	20.50	41.00	L->P 30°C
	U/l	192	163	221	14.50	29.00	L->P 25°C
	U/l	725	616	834	54.50	109.00	P->L Scandinavian & Dutch 37°C
	U/l	523	445	601	39.00	78.00	P->L Scandinavian & Dutch 30°C
	U/l	368	312	424	28.00	56.00	P->L Scandinavian & Dutch 25°C
	U/l	717	610	824	53.50	107.00	P->L German methods 37°C
	U/l	518	440	596	39.00	78.00	P->L German methods 30°C
U/l	364	309	419	27.50	55.00	P->L German methods 25°C	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	382	324	440	29.00	58.00	L->P IFCC 37°C
	U/l	276	234	318	21.00	42.00	L->P IFCC 30°C
	U/l	194	164	224	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	61	49	73	6.00	12.00	Other Colorimetric 37°C
	U/l	58	46	70	6.00	12.00	Roche Colorimetric 37°C
	U/l	58	47	69	5.50	11.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Ion selective electrode
	mg/dl	1.47	1.29	1.65	0.09	0.18	
	mmol/l	2.13	1.87	2.39	0.13	0.26	Spectrophotometric
	mg/dl	1.48	1.30	1.66	0.09	0.18	
Magnesium	mmol/l	1.69	1.48	1.90	0.11	0.21	Arsenazo III
	mg/dl	4.11	3.60	4.62	0.26	0.51	
	mmol/l	1.68	1.48	1.88	0.10	0.20	Atomic absorption
	mg/dl	4.08	3.60	4.56	0.24	0.48	
	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	
	mmol/l	1.70	1.50	1.90	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.13	3.65	4.61	0.24	0.48	
mmol/l	1.73	1.52	1.94	0.11	0.21	Enzymatic	
mg/dl	4.20	3.69	4.71	0.26	0.51		
Osmolality	mOsm/kg	353	282	424	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.26	1.92	2.60	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.01	5.95	8.07	0.53	1.06	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.98	5.92	8.04	0.53	1.06	
Potassium	mmol/l	6.41	5.89	6.93	0.26	0.52	ISE method - indirect
Protein Total	g/l	44.8	35.8	53.8	4.50	9.00	Biuret reaction end point
	g/dl	4.48	3.58	5.38	0.45	0.90	
	g/l	44.8	35.8	53.8	4.50	9.00	Biuret reaction kinetic
	g/dl	4.48	3.58	5.38	0.45	0.90	
PSA Total	ng/ml =	30.3	22.7	37.9	3.80	7.60	Roche Cobas 6000/8000
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.32	1.05	1.59	0.14	0.27	Roche Elecsys
	μU/ml =	1.33	1.07	1.59	0.13	0.26	Roche Cobas 6000/8000
TIBC	μmol/l	44.2	34.9	53.5	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	247	195	299	26.00	52.00	
	μmol/l	40.1	31.7	48.5	4.20	8.40	Calculated from Transferrin
	μg/dl	224	177	271	23.50	47.00	
Total T3	nmol/l	4.25	3.19	5.31	0.53	1.06	Roche Cobas 6000/8000
	ng/ml	2.77	2.08	3.46	0.35	0.69	
	ng/dl	277	208	346	34.50	69.00	Roche Cobas 6000/8000
Total T4	nmol/l	178	133	223	22.50	45.00	Roche Cobas 6000/8000
	μg/dl	13.9	10.4	17.4	1.75	3.50	
	ng/ml	139	104	174	17.50	35.00	Roche Cobas 6000/8000
Triglycerides	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	248	208	288	20.00	40.00	

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.79	2.34	3.24	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	Urease end point
	mg/dl	118	100	136	9.00	18.00	
Urea	mmol/l	19.7	16.8	22.6	1.45	2.90	Urease kinetic
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.11	7.93	10.3	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.06	7.88	10.2	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.07	7.88	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.04	7.86	10.2	0.59	1.18	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
Alkaline Phosphatase	U/l	271	230	312	20.50	41.00	Roche Integra AMP buffer 37°C
	U/l	211	179	243	16.00	32.00	Roche Integra AMP buffer 30°C
	U/l	173	147	199	13.00	26.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	139	111	167	14.00	28.00	Tris buffer without P5P 37°C
	U/l	103	82	124	10.50	21.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Amylase Total	U/l	285	242	328	21.50	43.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	69	56	82	6.50	13.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	33.8	26.7	40.9	3.55	7.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.98	1.56	2.40	0.21	0.42	
	µmol/l	31.5	24.9	38.1	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.84	1.46	2.22	0.19	0.38	
	µmol/l	32.9	26.0	39.8	3.45	6.90	Roche JG factored
	mg/dl	1.92	1.52	2.32	0.20	0.40	
µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Dichloroaniline (DCA)	
mg/dl	1.84	1.45	2.23	0.20	0.39		
Bilirubin Total	µmol/l	82.0	64.8	99.2	8.60	17.20	Diazo with Sulphanilic Acid
	mg/dl	4.80	3.79	5.81	0.51	1.01	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	83.6	66.0	101	8.80	17.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.89	3.86	5.92	0.52	1.03	
	µmol/l	80.7	63.8	97.6	8.45	16.90	Diazonium ion
	mg/dl	4.72	3.73	5.71	0.50	0.99	
Calcium	mmol/l	3.02	2.72	3.32	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.1	10.9	13.3	0.60	1.20	
	mmol/l	2.98	2.68	3.28	0.15	0.30	NM-BAPTA
	mg/dl	11.9	10.7	13.1	0.60	1.20	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.82	5.93	7.71	0.45	0.89	Cholesterol Oxidase
	mg/dl	263	229	297	17.00	34.00	
CK Total	U/l	482	395	569	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	302	247	357	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	205	168	242	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	373	299	447	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	380	304	456	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	386	308	464	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.36	3.48	5.24	0.44	0.88	
	µmol/l	378	303	453	37.50	75.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.27	3.42	5.12	0.43	0.85	
gamma-GT	U/l	171	146	196	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	135	115	155	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	90	122	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	166	141	191	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	131	111	151	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	102	87	117	7.50	15.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
HDL - Cholesterol	mmol/l	2.82	2.40	3.24	0.21	0.42	Direct HDL Roche 3rd generation
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	3.10	2.64	3.56	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	120	102	138	9.00	18.00	
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric with ppt.
	µg/dl	214	175	253	19.50	39.00	
	µmol/l	37.2	30.5	43.9	3.35	6.70	Colorimetric without ppt.
	µg/dl	208	170	246	19.00	38.00	
LD (LDH)	U/l	384	326	442	29.00	58.00	L->P IFCC 37°C
	U/l	277	235	319	21.00	42.00	L->P IFCC 30°C
	U/l	195	165	225	15.00	30.00	L->P IFCC 25°C
Lipase	U/l	64	52	76	6.00	12.00	Roche Colorimetric 37°C
Magnesium	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	
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	ISE method - indirect
Protein Total	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction end point
	g/dl	4.59	3.67	5.51	0.46	0.92	

Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.83	2.38	3.28	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	211	289	19.50	39.00	
	mmol/l	2.91	2.44	3.38	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	258	216	300	21.00	42.00	
	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/Glycerol Dehydrogenase
	mg/dl	253	212	294	20.50	41.00	
Urea	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease kinetic
	mg/dl	116	98.6	133	8.70	17.40	
	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	0.55	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	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.16	7.96	10.4	0.60	1.20	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.07	7.90	10.2	0.59	1.17	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.4	25.8	35.0	2.30	4.60	Bromocresol Green
	g/dl	3.04	2.58	3.50	0.23	0.46	
	g/l	30.2	25.6	34.8	2.30	4.60	Bromocresol Purple
	g/dl	3.02	2.56	3.48	0.23	0.46	
Alkaline Phosphatase	U/l	259	220	298	19.50	39.00	Roche Integra AMP buffer 37°C
	U/l	202	171	233	15.50	31.00	Roche Integra AMP buffer 30°C
	U/l	166	141	191	12.50	25.00	Roche Integra AMP buffer 25°C
	U/l	269	229	309	20.00	40.00	AMP optimised to IFCC 37°C
	U/l	210	178	242	16.00	32.00	AMP optimised to IFCC 30°C
	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	141	112	170	14.50	29.00	Tris buffer without P5P 37°C
	U/l	104	83	125	10.50	21.00	Tris buffer without P5P 30°C
	U/l	79	63	95	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	272	231	313	20.50	41.00	Immunoinhibition EPS substrate 37°C
	U/l	256	217	295	19.50	39.00	Roche EPS Liquid 37°C
Amylase Total	U/l	289	245	333	22.00	44.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	272	231	313	20.50	41.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	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

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	30.7	24.2	37.2	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	30.4	24.0	36.8	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.40	2.16	0.19	0.38	
Bilirubin Total	µmol/l	30.2	23.9	36.5	3.15	6.30	Roche JG factored
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	µmol/l	86.2	68.1	104	9.05	18.10	Diazo with Sulphanilic Acid
	mg/dl	5.04	3.98	6.10	0.53	1.06	
Calcium	µmol/l	86.7	68.5	105	9.10	18.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.07	4.01	6.13	0.53	1.06	
	µmol/l	85.5	67.5	104	9.00	18.00	Diazonium ion
	mg/dl	5.00	3.95	6.05	0.53	1.05	
Chloride	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	2.99	2.69	3.29	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Cholesterol	mmol/l	3.00	2.70	3.30	0.15	0.30	NM-BAPTA
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.75	5.87	7.63	0.44	0.88	Cholesterol Oxidase
	mg/dl	261	227	295	17.00	34.00	
Cholinesterase	U/l	5384	4307	6461	538.50	1077.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	505	414	596	45.50	91.00	CK-NAC serum start (DGKC) 37°C
	U/l	316	259	373	28.50	57.00	CK-NAC serum start (DGKC) 30°C
	U/l	215	176	254	19.50	39.00	CK-NAC serum start (DGKC) 25°C

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	488	400	576	44.00	88.00	CK-NAC substrate start (DGKC) 37°C
	U/l	305	250	360	27.50	55.00	CK-NAC substrate start (DGKC) 30°C
	U/l	207	170	244	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	495	406	584	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	310	254	366	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	210	173	247	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	392	314	470	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	396	317	475	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.47	3.58	5.36	0.45	0.89	
	µmol/l	392	314	470	39.00	78.00	Jaffe rate blanked
	mg/dl	4.43	3.55	5.31	0.44	0.88	
	µmol/l	395	316	474	39.50	79.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.46	3.57	5.35	0.45	0.89	
gamma-GT	U/l	163	139	187	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	110	146	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	86	116	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	176	150	202	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	139	118	160	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	109	93	125	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	Glucose	mmol/l	15.7	13.4	18.0	1.15	2.30
mg/dl		283	241	325	21.00	42.00	
mmol/l		15.9	13.5	18.3	1.20	2.40	Glucose oxidase
mg/dl		287	243	331	22.00	44.00	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.97	2.52	3.42	0.23	0.45	Direct HDL PEGME
	mg/dl	115	97.3	133	8.85	17.70	
	mmol/l	2.79	2.37	3.21	0.21	0.42	Direct HDL Roche 3rd generation
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	3.03	2.58	3.48	0.23	0.45	Direct HDL Roche 4th Generation
	mg/dl	117	99.6	134	8.70	17.40	
	µmol/l	36.0	29.5	42.5	3.25	6.50	Colorimetric with ppt.
	µg/dl	201	165	237	18.00	36.00	
Iron	µmol/l	36.2	29.7	42.7	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	166	238	18.00	36.00	
	µg/dl	202	166	238	18.00	36.00	
Lactate	mmol/l	5.76	4.72	6.80	0.52	1.04	Colorimetric Lactate Oxidase
	mg/dl	51.9	42.5	61.3	4.70	9.40	
LD (LDH)	U/l	386	328	444	29.00	58.00	L->P 37°C
	U/l	279	237	321	21.00	42.00	L->P 30°C
	U/l	196	166	226	15.00	30.00	L->P 25°C
	U/l	719	611	827	54.00	108.00	P->L German methods 37°C
	U/l	519	441	597	39.00	78.00	P->L German methods 30°C
	U/l	365	310	420	27.50	55.00	P->L German methods 25°C
	U/l	381	323	439	29.00	58.00	L->P IFCC 37°C
	U/l	275	233	317	21.00	42.00	L->P IFCC 30°C
	U/l	193	164	222	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	57	46	68	5.50	11.00	Roche Colorimetric 37°C
	U/l	55	44	66	5.50	11.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	2.17	1.91	2.43	0.13	0.26	Spectrophotometric
	mg/dl	1.51	1.33	1.69	0.09	0.18	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	1.65	1.45	1.85	0.10	0.20	Atomic absorption
	mg/dl	4.01	3.52	4.50	0.25	0.49	
	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	
	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		
Phosphate Inorganic	mmol/l	2.28	1.93	2.63	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.07	5.98	8.16	0.55	1.09	
	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	6.41	5.89	6.93	0.26	0.52	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	47.2	37.7	56.7	4.75	9.50	Biuret reaction kinetic
	g/dl	4.72	3.77	5.67	0.48	0.95	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	44.5	35.2	53.8	4.65	9.30	FE+UIBC(saturation with iron)
	µg/dl	249	197	301	26.00	52.00	
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.80	2.36	3.24	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	248	209	287	19.50	39.00	
	mmol/l	2.78	2.34	3.22	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	246	207	285	19.50	39.00	

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease end point
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.8	16.9	22.7	1.45	2.90	Urease kinetic
	mg/dl	119	102	136	8.50	17.00	
Uric Acid (Urate)	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	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.19	8.00	10.4	0.60	1.19	
mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase	
mg/dl	9.17	7.98	10.4	0.60	1.19		
mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl	9.17	7.98	10.4	0.60	1.19		

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

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	252	214	290	19.00	38.00	Roche Integra AMP buffer 37°C
	U/l	196	167	225	14.50	29.00	Roche Integra AMP buffer 30°C
	U/l	161	137	185	12.00	24.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	107	85	129	11.00	22.00	Tris buffer without P5P 30°C
	U/l	81	65	97	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	253	215	291	19.00	38.00	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	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
Bilirubin Direct	µmol/l	32.6	25.8	39.4	3.40	6.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.91	1.51	2.31	0.20	0.40	
Bilirubin Total	µmol/l	92.9	73.4	112	9.75	19.50	Diazo with Sulphanilic Acid
	mg/dl	5.43	4.29	6.57	0.57	1.14	
	µmol/l	84.4	66.7	102	8.85	17.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.94	3.90	5.98	0.52	1.04	
	µmol/l	85.3	67.4	103	8.95	17.90	Diazonium ion
mg/dl	4.99	3.94	6.04	0.53	1.05		

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.98	2.68	3.28	0.15	0.30	Cresolphthalein complexone
	mg/dl	11.9	10.7	13.1	0.60	1.20	
	mmol/l	2.98	2.68	3.28	0.15	0.30	NM-BAPTA
	mg/dl	11.9	10.7	13.1	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.67	5.81	7.53	0.43	0.86	Cholesterol Oxidase
	mg/dl	257	224	290	16.50	33.00	
Cholinesterase	U/l	5334	4267	6401	533.50	1067.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	480	393	567	43.50	87.00	CK-NAC substrate start (DGKC) 37°C
	U/l	300	246	354	27.00	54.00	CK-NAC substrate start (DGKC) 30°C
	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	472	387	557	42.50	85.00	CK-NAC (IFCC) 37°C
	U/l	295	242	348	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	201	164	238	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	386	309	463	38.50	77.00	Enzymatic UV method
	mg/dl	4.36	3.49	5.23	0.44	0.87	
	µmol/l	401	321	481	40.00	80.00	Roche Creatinine Plus
	mg/dl	4.53	3.63	5.43	0.45	0.90	
	µmol/l	390	312	468	39.00	78.00	Jaffe rate blanked
	mg/dl	4.41	3.53	5.29	0.44	0.88	
	µmol/l	400	320	480	40.00	80.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	392	314	470	39.00	78.00	IDMS traceable
	mg/dl	4.43	3.55	5.31	0.44	0.88	
gamma-GT	U/l	163	138	188	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	109	147	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	85	117	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

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	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.86	2.43	3.29	0.22	0.43	Direct HDL Roche 3rd generation
	mg/dl	110	93.8	126	8.10	16.20	
	mmol/l	3.07	2.61	3.53	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	119	101	137	9.00	18.00	
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	383	326	440	28.50	57.00	L->P IFCC 37°C
	U/l	277	235	319	21.00	42.00	L->P IFCC 30°C
	U/l	194	165	223	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	56	45	67	5.50	11.00	Roche Colorimetric 37°C
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	1.70	1.50	1.90	0.10	0.20	Chlorphosphonazo III
	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	
Potassium	mmol/l	6.42	5.91	6.93	0.26	0.51	ISE method - indirect
Protein Total	g/l	44.3	35.4	53.2	4.45	8.90	Biuret reaction end point
	g/dl	4.43	3.54	5.32	0.45	0.89	

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
TIBC	μmol/l	44.8	35.4	54.2	4.70	9.40	FE+UIBC(saturation with iron)
	μg/dl	250	198	302	26.00	52.00	
Triglycerides	mmol/l	2.78	2.34	3.22	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	246	207	285	19.50	39.00	
	mmol/l	2.79	2.35	3.23	0.22	0.44	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	247	208	286	19.50	39.00	
UIBC	μmol/l	8.63	7.08	10.2	0.78	1.55	Direct Colorimetric
	μg/dl	48.2	39.6	56.8	4.30	8.60	
Urea	mmol/l	19.4	16.5	22.3	1.45	2.90	Urease kinetic
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.4	16.5	22.3	1.45	2.90	BUN
Uric Acid (Urate)	mg/dl	54.4	46.2	62.6	4.10	8.20	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	8.87	7.71	10.0	0.58	1.16	
	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	9.02	7.85	10.2	0.59	1.17		

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.6	25.1	34.1	2.25	4.50	Bromocresol Green
	g/dl	2.96	2.51	3.41	0.23	0.45	
Alkaline Phosphatase	U/l	515	438	592	38.50	77.00	Diethanolamine buffer DEA 37°C
	U/l	335	285	385	25.00	50.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	301	256	346	22.50	45.00	Radox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	312	265	359	23.50	47.00	Radox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	163	131	195	16.00	32.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Enzymatic
Bile Acids	µmol/l	49.4	39.5	59.3	4.95	9.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	33.1	26.1	40.1	3.50	7.00	Diazo with Sulphanilic Acid
	mg/dl	1.94	1.53	2.35	0.21	0.41	
	µmol/l	33.3	26.3	40.3	3.50	7.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.95	1.54	2.36	0.21	0.41	
Bilirubin Total	µmol/l	99.8	78.9	121	10.45	20.90	Diazo with Sulphanilic Acid
	mg/dl	5.84	4.62	7.06	0.61	1.22	
	µmol/l	101	80.1	122	10.45	20.90	Oxidation to Biliverdin/Vanadate
	mg/dl	5.91	4.69	7.13	0.61	1.22	
Calcium	mmol/l	3.00	2.70	3.30	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE direct

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	7.44	6.47	8.41	0.49	0.97	Cholesterol Oxidase
	mg/dl	287	250	324	18.50	37.00	
CK Total	U/l	510	418	602	46.00	92.00	CK-NAC substrate start (DGKC) 37°C
	U/l	568	466	670	51.00	102.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	328	262	394	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.71	2.96	4.46	0.38	0.75	
	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method
	mg/dl	4.46	3.57	5.35	0.45	0.89	
gamma-GT	U/l	181	154	208	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	16.1	13.7	18.5	1.20	2.40	Glucose oxidase
	mg/dl	290	247	333	21.50	43.00	
Iron	µmol/l	37.7	30.9	44.5	3.40	6.80	Colorimetric without ppt.
	µg/dl	211	173	249	19.00	38.00	
Lactate	mmol/l	5.62	4.61	6.63	0.51	1.01	Colorimetric Lactate Oxidase
	mg/dl	50.6	41.5	59.7	4.55	9.10	
LD (LDH)	U/l	760	646	874	57.00	114.00	P->L German methods 37°C
	U/l	371	315	427	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	89	71	107	9.00	18.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.15	1.89	2.41	0.13	0.26	Colorimetric
	mg/dl	1.49	1.31	1.67	0.09	0.18	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.25	6.17	8.33	0.54	1.08	

RX SERIES®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Potassium	mmol/l	6.48	5.96	7.00	0.26	0.52	Enzymatic
	mmol/l	6.30	5.80	6.80	0.25	0.50	ISE method - direct
Protein Total	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction end point
	g/dl	4.59	3.67	5.51	0.46	0.92	
Sodium	mmol/l	160	152	168	4.00	8.00	Enzymatic
	mmol/l	160	152	168	4.00	8.00	ISE method - direct
TIBC	µmol/l	50.8	40.1	61.5	5.35	10.70	Direct Colorimetric
	µg/dl	284	224	344	30.00	60.00	
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.71	8.45	11.0	0.63	1.26	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.68	8.42	10.9	0.63	1.26	



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

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.5	24.2	32.8	2.15	4.30	Bromocresol Green
	g/dl	2.85	2.42	3.28	0.22	0.43	
Alkaline Phosphatase	U/l	399	339	459	30.00	60.00	Diethanolamine buffer DEA 37°C
	U/l	277	235	319	21.00	42.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	271	230	312	20.50	41.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	287	244	330	21.50	43.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	159	127	191	16.00	32.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.9	15.0	22.8	1.95	3.90	Enzymatic
Bile Acids	µmol/l	47.5	38.0	57.0	4.75	9.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	28.9	22.9	34.9	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.34	2.04	0.18	0.35	
	µmol/l	31.3	24.7	37.9	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Bilirubin Total	µmol/l	97.9	77.4	118	10.25	20.50	Diazo with Sulphanilic Acid
	mg/dl	5.73	4.53	6.93	0.60	1.20	
	µmol/l	102	80.2	124	10.90	21.80	Oxidation to Biliverdin/Vanadate
	mg/dl	5.97	4.69	7.25	0.64	1.28	
Calcium	mmol/l	2.97	2.67	3.27	0.15	0.30	Cresolphthalein complexone
	mg/dl	11.9	10.7	13.1	0.60	1.20	
	mmol/l	2.92	2.62	3.22	0.15	0.30	Arsenazo III
	mg/dl	11.7	10.5	12.9	0.60	1.20	



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

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.02	6.10	7.94	0.46	0.92	Cholesterol Oxidase
	mg/dl	271	235	307	18.00	36.00	
Cholinesterase	U/l	6126	4900	7352	613.00	1226.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	454	373	535	40.50	81.00	CK-NAC substrate start (DGKC) 37°C
	U/l	505	414	596	45.50	91.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	374	299	449	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	391	313	469	39.00	78.00	Enzymatic UV method
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	µmol/l	385	308	462	38.50	77.00	Creatinine PAP method
	mg/dl	4.35	3.48	5.22	0.44	0.87	
	µmol/l	384	307	461	38.50	77.00	Jaffe rate blanked
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	386	308	464	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.36	3.48	5.24	0.44	0.88	
	µmol/l	391	313	469	39.00	78.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.42	3.54	5.30	0.44	0.88	
gamma-GT	U/l	169	143	195	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	177	150	204	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	



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

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	2.11	1.79	2.43	0.16	0.32	Direct HDL Immunoseparation
	mg/dl	81.4	69.1	93.7	6.15	12.30	
	mmol/l	2.13	1.81	2.45	0.16	0.32	Direct Clearance Method
	mg/dl	82.2	69.9	94.5	6.15	12.30	
Iron	µmol/l	36.5	30.0	43.0	3.25	6.50	Colorimetric with ppt.
	µg/dl	204	168	240	18.00	36.00	
	µmol/l	36.7	30.1	43.3	3.30	6.60	Colorimetric without ppt.
	µg/dl	205	168	242	18.50	37.00	
Lactate	mmol/l	5.64	4.62	6.66	0.51	1.02	Colorimetric Lactate Oxidase
	mg/dl	50.8	41.6	60.0	4.60	9.20	
LD (LDH)	U/l	371	315	427	28.00	56.00	L->P 37°C
	U/l	728	619	837	54.50	109.00	P->L German methods 37°C
	U/l	369	313	425	28.00	56.00	L->P IFCC 37°C
Lipase	U/l	83	66	100	8.50	17.00	Other Colorimetric 37°C
Lithium	mmol/l	2.09	1.84	2.34	0.13	0.25	Spectrophotometric
	mg/dl	1.45	1.28	1.62	0.09	0.17	
Magnesium	mmol/l	1.69	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	2.29	1.94	2.64	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.10	6.01	8.19	0.55	1.09	
Potassium	mmol/l	6.44	5.92	6.96	0.26	0.52	ISE method - indirect
Protein Total	g/l	45.4	36.4	54.4	4.50	9.00	Biuret reaction end point
	g/dl	4.54	3.64	5.44	0.45	0.90	
	g/l	45.2	36.1	54.3	4.55	9.10	Biuret reaction kinetic
	g/dl	4.52	3.61	5.43	0.46	0.91	



SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400				ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)			
Lot. No. 1003UE Cat. No. HE1532/HS2611							
Size 20 x 5ml/ 5 x 5ml		Expiry 2022-02-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
TIBC	μmol/l	48.7	38.5	58.9	5.10	10.20	Removal of excess free iron
	μg/dl	272	215	329	28.50	57.00	
	μmol/l	49.9	39.4	60.4	5.25	10.50	FE+UIBC(saturation with iron)
	μg/dl	279	220	338	29.50	59.00	
	μmol/l	48.0	37.9	58.1	5.05	10.10	Direct Colorimetric
Triglycerides	mmol/l	2.88	2.42	3.34	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	255	214	296	20.50	41.00	
	mmol/l	2.92	2.45	3.39	0.24	0.47	L/G Kinase EP. no correction
	mg/dl	258	217	299	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	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
Uric Acid (Urate)	mg/dl	56.1	47.7	64.5	4.20	8.40	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.22	8.03	10.4	0.60	1.19	
	mmol/l	0.56	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	0.55	0.47	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.16	7.96	10.4	0.60	1.20	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	27.3	23.2	31.4	2.05	4.10	Bromocresol Purple
	g/dl	2.73	2.32	3.14	0.21	0.41	
Alkaline Phosphatase	U/l	287	244	330	21.50	43.00	Siemens Dimension AMP buffer 37°C
	U/l	284	242	326	21.00	42.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	158	127	189	15.50	31.00	Tris buffer with P5P 37°C
	U/l	157	125	189	16.00	32.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	350	297	403	26.50	53.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	201	161	241	20.00	40.00	Tris buffer with P5P 37°C
	U/l	200	160	240	20.00	40.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.9	15.0	22.8	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	18.7	14.8	22.6	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.866	1.31	0.11	0.22	
Bilirubin Total	µmol/l	91.3	72.1	111	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.34	4.22	6.46	0.56	1.12	
Calcium	mmol/l	2.95	2.66	3.24	0.15	0.29	Cresolphthalein complexone
	mg/dl	11.8	10.7	12.9	0.55	1.10	
Chloride	mmol/l	117	107	127	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.38	5.55	7.21	0.42	0.83	Cholesterol Oxidase
	mg/dl	246	214	278	16.00	32.00	
	mmol/l	6.40	5.57	7.23	0.42	0.83	Dimension-Siemens reagents
	mg/dl	247	215	279	16.00	32.00	

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	9539	7631	11447	954.00	1908.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	482	395	569	43.50	87.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	400	320	480	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.52	3.62	5.42	0.45	0.90	
	µmol/l	403	323	483	40.00	80.00	Enzymatic UV method
	mg/dl	4.55	3.65	5.45	0.45	0.90	
	µmol/l	397	318	476	39.50	79.00	Jaffe rate blanked
	mg/dl	4.49	3.59	5.39	0.45	0.90	
IDMS traceable	µmol/l	404	323	485	40.50	81.00	IDMS traceable
	mg/dl	4.57	3.65	5.49	0.46	0.92	
gamma-GT	U/l	199	169	229	15.00	30.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	208	177	239	15.50	31.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	2.71	2.30	3.12	0.21	0.41	Direct HDL PPD
	mg/dl	105	88.8	121	8.10	16.20	
	mmol/l	2.74	2.33	3.15	0.21	0.41	Direct HDL PEGME
	mg/dl	106	89.9	122	8.05	16.10	
Iron	µmol/l	35.6	29.2	42.0	3.20	6.40	Colorimetric with ppt.
	µg/dl	199	163	235	18.00	36.00	
	µmol/l	35.1	28.8	41.4	3.15	6.30	Colorimetric without ppt.
	µg/dl	196	161	231	17.50	35.00	
Lactate	mmol/l	5.97	4.89	7.05	0.54	1.08	UV LDH
	mg/dl	53.8	44.1	63.5	4.85	9.70	
LD (LDH)	U/l	372	316	428	28.00	56.00	Siemens Dimension L-P Non IFCC 37°C

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	364	309	419	27.50	55.00	L->P IFCC 37°C
Lipase	U/l	263	211	315	26.00	52.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.70	1.49	1.91	0.11	0.21	Methylthymol blue
	mg/dl	4.13	3.62	4.64	0.26	0.51	
Phosphate Inorganic	mmol/l	2.27	1.93	2.61	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.04	5.98	8.10	0.53	1.06	
	mmol/l	2.29	1.94	2.64	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.10	6.01	8.19	0.55	1.09	
Potassium	mmol/l	6.36	5.85	6.87	0.26	0.51	ISE method - indirect
Protein Total	g/l	46.2	37.0	55.4	4.60	9.20	Biuret reaction end point
	g/dl	4.62	3.70	5.54	0.46	0.92	
Sodium	mmol/l	162	154	170	4.00	8.00	ISE method - indirect
TIBC	µmol/l	38.3	30.2	46.4	4.05	8.10	FE+UIBC(saturation with iron)
	µg/dl	214	169	259	22.50	45.00	
	µmol/l	39.3	31.0	47.6	4.15	8.30	Direct Colorimetric
	µg/dl	220	173	267	23.50	47.00	
Triglycerides	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.75	2.31	3.19	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	243	204	282	19.50	39.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	249	209	289	20.00	40.00	
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease end point
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	

**SIEMENS DIMENSION EXL®****ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
	mg/dl	56.4	47.9	64.9	4.25	8.50	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.54	0.47	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.14	7.95	10.3	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.21	8.01	10.4	0.60	1.20	

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	27.5	23.4	31.6	2.05	4.10	Bromocresol Green
	g/dl	2.75	2.34	3.16	0.21	0.41	
	g/l	27.1	23.1	31.1	2.00	4.00	Bromocresol Purple
	g/dl	2.71	2.31	3.11	0.20	0.40	
Alkaline Phosphatase	U/l	282	239	325	21.50	43.00	Siemens Dimension AMP buffer 37°C
	U/l	285	242	328	21.50	43.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	158	126	190	16.00	32.00	Tris buffer with P5P 37°C
	U/l	159	127	191	16.00	32.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	343	291	395	26.00	52.00	Siemens - maltopenta/hexaoside 37°C
	U/l	349	297	401	26.00	52.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	203	162	244	20.50	41.00	Tris buffer with P5P 37°C
	U/l	202	162	242	20.00	40.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	19.0	15.1	22.9	1.95	3.90	Enzymatic
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	91.1	71.9	110	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.33	4.21	6.45	0.56	1.12	
Calcium	mmol/l	2.92	2.63	3.21	0.15	0.29	Cresolphthalein complexone
	mg/dl	11.7	10.5	12.9	0.60	1.20	
	mmol/l	2.99	2.69	3.29	0.15	0.30	Arsenazo III
	mg/dl	12.0	10.8	13.2	0.60	1.20	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.42	5.58	7.26	0.42	0.84	Cholesterol Oxidase
	mg/dl	248	215	281	16.50	33.00	
	mmol/l	6.38	5.55	7.21	0.42	0.83	Dimension-Siemens reagents
	mg/dl	246	214	278	16.00	32.00	
Cholinesterase	U/l	9473	7579	11368	947.00	1894.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	481	395	567	43.00	86.00	CK-NAC (IFCC) 37°C
	U/l	477	391	563	43.00	86.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	399	319	479	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.51	3.60	5.42	0.46	0.91	
	µmol/l	395	316	474	39.50	79.00	Enzymatic UV method
	mg/dl	4.46	3.57	5.35	0.45	0.89	
	µmol/l	393	314	472	39.50	79.00	Creatinine PAP method
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	µmol/l	400	320	480	40.00	80.00	Jaffe rate blanked
	mg/dl	4.52	3.62	5.42	0.45	0.90	
gamma-GT	U/l	192	163	221	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	209	177	241	16.00	32.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose dehydrogenase
	mg/dl	281	240	322	20.50	41.00	
	mmol/l	15.7	13.4	18.0	1.15	2.30	Hexokinase
	mg/dl	283	241	325	21.00	42.00	
	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	

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Analyte	unit	Target	low	high	1SD	2SD	methods	
HDL - Cholesterol	mmol/l	2.68	2.28	3.08	0.20	0.40	Direct HDL PPD	
	mg/dl	103	88.0	118	7.50	15.00		
	mmol/l	2.77	2.36	3.18	0.21	0.41	Direct HDL Immunoseparation	
	mg/dl	107	91.1	123	7.95	15.90		
	mmol/l	2.69	2.28	3.10	0.21	0.41	Direct HDL PEGME	
	mg/dl	104	88.0	120	8.00	16.00		
Iron	mmol/l	2.70	2.29	3.11	0.21	0.41	Direct Clearance Method	
	mg/dl	104	88.4	120	7.80	15.60		
	Iron	µmol/l	35.3	28.9	41.7	3.20	6.40	Colorimetric with ppt.
		µg/dl	197	162	232	17.50	35.00	
Iron	µmol/l	35.1	28.8	41.4	3.15	6.30	Colorimetric without ppt.	
	µg/dl	196	161	231	17.50	35.00		
Lactate	mmol/l	5.80	4.76	6.84	0.52	1.04	UV LDH	
	mg/dl	52.3	42.9	61.7	4.70	9.40		
LD (LDH)	U/l	361	307	415	27.00	54.00	Siemens Dimension L-P Non IFCC 37°C	
	U/l	367	312	422	27.50	55.00	L->P IFCC 37°C	
Lipase	U/l	265	212	318	26.50	53.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C	
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	1.70	1.49	1.91	0.11	0.21	Methylthymol blue	
	mg/dl	4.13	3.62	4.64	0.26	0.51		
Phosphate Inorganic	mmol/l	2.28	1.93	2.63	0.18	0.35	Phosphomolybdate enzymatic	
	mg/dl	7.07	5.98	8.16	0.55	1.09		
	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		

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Potassium	mmol/l	6.28	5.78	6.78	0.25	0.50	ISE method - indirect	
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point	
	g/dl	4.60	3.68	5.52	0.46	0.92		
Sodium	mmol/l	160	152	168	4.00	8.00	ISE method - indirect	
TIBC	µmol/l	39.7	31.4	48.0	4.15	8.30	Removal of excess free iron	
	µg/dl	222	176	268	23.00	46.00		
	µmol/l	38.8	30.7	46.9	4.05	8.10	FE+UIBC(saturation with iron)	
	µg/dl	217	172	262	22.50	45.00		
	µmol/l	39.3	31.1	47.5	4.10	8.20		Direct Colorimetric
µg/dl	220	174	266	23.00	46.00			
Triglycerides	mmol/l	2.77	2.33	3.21	0.22	0.44	Lipase/GPO-PAP no correction	
	mg/dl	245	206	284	19.50	39.00		
	mmol/l	2.77	2.32	3.22	0.23	0.45	L/G Kinase EP. no correction	
	mg/dl	245	205	285	20.00	40.00		
Urea	mmol/l	2.77	2.32	3.22	0.23	0.45	Lipase/Glycerol Dehydrogenase	
	mg/dl	245	205	285	20.00	40.00		
	Urea	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease end point
		mg/dl	118	100	136	9.00	18.00	
mmol/l		20.1	17.0	23.2	1.55	3.10	Urease kinetic	
mg/dl		121	102	140	9.50	19.00		
Uric Acid (Urate)	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN	
	mg/dl	56.4	47.9	64.9	4.25	8.50		
	Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
		mg/dl	9.19	8.00	10.4	0.60	1.19	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.29	8.08	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.21	8.01	10.4	0.60	1.20	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.21	8.00	10.4	0.61	1.21	

SIEMENS DIMENSION Vista®

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Lot. No. 1003UE Cat. No. HE1532/HS2611

Size 20 x 5ml/ 5 x 5ml Expiry 2022-02-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	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	278	236	320	21.00	42.00	Siemens Dimension AMP buffer 37°C
	U/l	294	250	338	22.00	44.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	152	122	182	15.00	30.00	Tris buffer with P5P 37°C
	U/l	151	121	181	15.00	30.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	341	290	392	25.50	51.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	204	163	245	20.50	41.00	Tris buffer with P5P 37°C
	U/l	205	164	246	20.50	41.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.0	13.5	20.5	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	20.3	16.0	24.6	2.15	4.30	Diazo with Sulphanilic Acid
	mg/dl	1.19	0.936	1.44	0.13	0.25	
Bilirubin Total	µmol/l	90.1	71.2	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.27	4.17	6.37	0.55	1.10	
Calcium	mmol/l	2.97	2.67	3.27	0.15	0.30	Cresolphthalein complexone
	mg/dl	11.9	10.7	13.1	0.60	1.20	
Chloride	mmol/l	120	110	130	5.00	10.00	ISE indirect
Cholesterol	mmol/l	6.38	5.55	7.21	0.42	0.83	Cholesterol Oxidase
	mg/dl	246	214	278	16.00	32.00	
	mmol/l	6.27	5.46	7.08	0.41	0.81	Dimension-Siemens reagents
	mg/dl	242	211	273	15.50	31.00	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	8845	7076	10614	884.50	1769.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	489	401	577	44.00	88.00	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	
gamma-GT	U/l	203	172	234	15.50	31.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	213	181	245	16.00	32.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.50	41.00	
HDL - Cholesterol	mmol/l	2.51	2.13	2.89	0.19	0.38	Direct HDL PPD
	mg/dl	96.9	82.2	112	7.35	14.70	
	mmol/l	2.65	2.25	3.05	0.20	0.40	Direct HDL PEGME
	mg/dl	102	86.9	117	7.55	15.10	
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	6.02	4.94	7.10	0.54	1.08	UV LDH
	mg/dl	54.2	44.5	63.9	4.85	9.70	
LD (LDH)	U/l	376	319	433	28.50	57.00	L->P IFCC 37°C
Lipase	U/l	328	263	393	32.50	65.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.78	1.56	2.00	0.11	0.22	Methylthymol blue
	mg/dl	4.33	3.79	4.87	0.27	0.54	
Osmolality	mOsm/kg	363	291	435	36.00	72.00	Calculated
Phosphate Inorganic	mmol/l	2.22	1.88	2.56	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.88	5.83	7.93	0.53	1.05	
Potassium	mmol/l	6.31	5.81	6.81	0.25	0.50	ISE method - indirect
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	

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.02	2.54	3.50	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	267	225	309	21.00	42.00	
Urea	mmol/l	20.0	17.0	23.0	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	20.0	17.0	23.0	1.50	3.00	BUN
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase catalase 340nm
	mg/dl	9.17	7.98	10.4	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.17	7.98	10.4	0.60	1.19	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.24	8.05	10.4	0.60	1.19	

VITALAB FLEXOR®

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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	
Alkaline Phosphatase	U/l	429	365	493	32.00	64.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	153	122	184	15.50	31.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	152	121	183	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	29.9	23.6	36.2	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.75	1.38	2.12	0.19	0.37	
Bilirubin Total	µmol/l	102	80.3	124	10.85	21.70	Diazo with Sulphanilic Acid
	mg/dl	5.97	4.70	7.24	0.64	1.27	
Calcium	mmol/l	2.90	2.61	3.19	0.15	0.29	Arsenazo III
	mg/dl	11.6	10.5	12.7	0.55	1.10	
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Cholesterol Oxidase
	mg/dl	270	235	305	17.50	35.00	
gamma-GT	U/l	171	145	197	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
Phosphate Inorganic	mmol/l	2.42	2.06	2.78	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.50	6.39	8.61	0.56	1.11	
Protein Total	g/l	49.2	39.4	59.0	4.90	9.80	Biuret reaction end point
	g/dl	4.92	3.94	5.90	0.49	0.98	
Triglycerides	mmol/l	2.53	2.12	2.94	0.21	0.41	Lipase/GPO-PAP no correction
	mg/dl	224	188	260	18.00	36.00	