

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

<b>CAT. NO.</b> HE1532	<b>GTIN:</b> 05055273203608	<b>SIZE:</b> 20 x 5ml
<b>CAT. NO.</b> HS2611	<b>GTIN:</b> 05055273203813	<b>SIZE:</b> 5 x 5ml
<b>LOT NO.</b> 1013UE	<b>EXPIRY:</b> 2022-04-28	

### INTENDED USE

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

### DEVICE DESCRIPTION

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

### SAFETY PRECAUTIONS AND WARNINGS

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

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.

However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

### STORAGE AND STABILITY

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

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

### LIMITATIONS

For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25µl - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at -18°C to -24°C.

Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.

Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 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](mailto: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.

25 Apr '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<sup>®</sup>、Bayer ADVIA 1650<sup>®</sup>、Abbott Architect c8000/ci8200<sup>®</sup>、BAYER RA500/1000/2000/XT/OPERA<sup>®</sup>、Bayer/Ciba 550 Express<sup>®</sup>、COBAS INTEGRA<sup>®</sup>、COBAS MIRA<sup>®</sup>、DADE DIMENSION<sup>®</sup>、FALCOR 300 Series、HITACHI SERIES<sup>®</sup>、JOHNSON AND JOHNSON VITROS<sup>®</sup>、Konelab 20/30/60<sup>®</sup>、OLYMPUS AU400/500/600/800<sup>®</sup>、RX DAYTONA<sup>®</sup>、SYNCHRON CX4/5/7/9/LX20、VITALAB SELECTRA<sup>®</sup>全自动生化分析仪。  
Bayer ACS 3<sup>rd</sup> Generation、Bayer/Technicon RA50<sup>®</sup>、iLab 300<sup>®</sup>、iLab 600<sup>®</sup>、VitalabFlexor<sup>®</sup>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  
您可在我司网站 [www.randox.cn](http://www.randox.cn) 的‘试剂盒说明书’网页中查看此产品具体信息和靶值。

**【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：

**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：

**【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】**

2016 年 11 月 1 日

(S): 25 Apr '19 ne

## Abbott Alinity/ Architect c/ci Systems®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.3	24.1	32.5	2.10	4.20	Bromocresol Green
	g/dl	2.83	2.41	3.25	0.21	0.42	
	g/l	27.0	22.9	31.1	2.05	4.10	Bromocresol Purple
	g/dl	2.70	2.29	3.11	0.21	0.41	
Alkaline Phosphatase	U/l	305	259	351	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	303	258	348	22.50	45.00	AMP non-optimised 37°C
ALT (GPT)	U/l	146	117	175	14.50	29.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	260	221	299	19.50	39.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	324	275	373	24.50	49.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	360	306	414	27.00	54.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.1	12.8	19.4	1.65	3.30	Enzymatic
Bile Acids	µmol/l	45.1	36.1	54.1	4.50	9.00	Enzymatic Colorimetric
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	
	µmol/l	28.9	22.9	34.9	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.69	1.34	2.04	0.18	0.35	
Bilirubin Total	µmol/l	87.6	69.2	106	9.20	18.40	Diazo with Dichloroaniline (DCA)
	mg/dl	5.12	4.05	6.19	0.54	1.07	
	µmol/l	89.7	70.9	109	9.40	18.80	Diazo with Sulphanilic Acid
	mg/dl	5.25	4.15	6.35	0.55	1.10	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	µmol/l	90.9	71.8	110	9.55	19.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.32	4.20	6.44	0.56	1.12	
	µmol/l	87.0	68.7	105	9.15	18.30	Diazonium ion
	mg/dl	5.09	4.02	6.16	0.54	1.07	
Calcium	mmol/l	3.07	2.77	3.37	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.15	6.22	8.08	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
Cholinesterase	U/l	5739	4591	6887	574.00	1148.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	501	411	591	45.00	90.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	18.8	15.0	22.6	1.90	3.80	Colorimetric
	µg/dl	120	95.4	145	12.30	24.60	
Creatinine	µmol/l	398	318	478	40.00	80.00	Alkaline picrate no deproteinization
	mg/dl	4.50	3.59	5.41	0.46	0.91	
	µmol/l	382	306	458	38.00	76.00	Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	383	306	460	38.50	77.00	Creatinine PAP method
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	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	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	177	150	204	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	174	147	201	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

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Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
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	15.9	13.5	18.3	1.20	2.40	Glucose oxidase	
	mg/dl	287	243	331	22.00	44.00		
HDL - Cholesterol	mmol/l	2.46	2.09	2.83	0.19	0.37	Direct HDL PPD	
	mg/dl	95.0	80.7	109	7.15	14.30		
	mmol/l	2.51	2.14	2.88	0.19	0.37	Direct Clearance Method	
	mg/dl	96.9	82.6	111	7.15	14.30		
Iron	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	40.6	33.3	47.9	3.65	7.30	Colorimetric with ppt.
		μg/dl	227	186	268	20.50	41.00	
μmol/l		39.8	32.7	46.9	3.55	7.10	Colorimetric without ppt.	
μg/dl		222	183	261	19.50	39.00		
Lactate	mmol/l	5.82	4.77	6.87	0.53	1.05	Colorimetric Lactate Oxidase	
	mg/dl	52.4	43.0	61.8	4.70	9.40		
LD (LDH)	U/l	357	303	411	27.00	54.00	L->P 37°C	
	U/l	354	301	407	26.50	53.00	L->P IFCC 37°C	
Lipase	U/l	63	50	76	6.50	13.00	Other Colorimetric 37°C	
Lithium	mmol/l	2.03	1.78	2.28	0.13	0.25	Spectrophotometric	
	mg/dl	1.41	1.24	1.58	0.09	0.17		
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Arsenazo III	
	mg/dl	4.08	3.60	4.56	0.24	0.48		
	mmol/l	1.78	1.57	1.99	0.11	0.21	Xylidyl Blue	
	mg/dl	4.33	3.82	4.84	0.26	0.51		

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	1.69	1.49	1.89	0.10	0.20	Enzymatic
	mg/dl	4.11	3.62	4.60	0.25	0.49	
Osmolality	mOsm/kg	356	285	427	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.73	5.70	7.76	0.52	1.03	
	mmol/l	2.18	1.85	2.51	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.76	5.74	7.78	0.51	1.02	
Potassium	mmol/l	6.27	5.77	6.77	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.4	35.5	53.3	4.45	8.90	Biuret reaction end point
	g/dl	4.44	3.55	5.33	0.45	0.89	
	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	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	45.8	36.2	55.4	4.80	9.60	FE+UIBC(saturation with iron)
	µg/dl	256	202	310	27.00	54.00	
	µmol/l	39.5	31.2	47.8	4.15	8.30	Calculated from Transferrin
	µg/dl	221	174	268	23.50	47.00	
Triglycerides	mmol/l	2.79	2.34	3.24	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	247	207	287	20.00	40.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.81	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	2.80	2.35	3.25	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	248	208	288	20.00	40.00	



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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.9	16.9	22.9	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
	mg/dl	56.1	47.7	64.5	4.20	8.40	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.76	8.48	11.0	0.64	1.28	
	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.79	8.52	11.1	0.64	1.27	
	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.74	8.48	11.0	0.63	1.26	

## ABX Pentra 400®

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Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	28.7	24.4	33.0	2.15	4.30	Bromocresol Green
	g/dl	2.87	2.44	3.30	0.22	0.43	
ALT (GPT)	U/l	173	139	207	17.00	34.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	160	128	192	16.00	32.00	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	
Calcium	mmol/l	3.20	2.88	3.52	0.16	0.32	Arsenazo III
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Cholesterol	mmol/l	7.57	6.59	8.55	0.49	0.98	Cholesterol Oxidase
	mg/dl	292	254	330	19.00	38.00	
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Glucose oxidase
	mg/dl	287	243	331	22.00	44.00	
Phosphate Inorganic	mmol/l	2.35	2.00	2.70	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.29	6.20	8.38	0.55	1.09	
Protein Total	g/l	49.4	39.6	59.2	4.90	9.80	Biuret reaction end point
	g/dl	4.94	3.96	5.92	0.49	0.98	
Triglycerides	mmol/l	2.86	2.40	3.32	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	253	212	294	20.50	41.00	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	

**ABX Pentra 400®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Uric Acid (Urate)	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.90	8.60	11.2	0.65	1.30	

## Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	26.8	22.8	30.8	2.00	4.00	Bromocresol Green
	g/dl	2.68	2.28	3.08	0.20	0.40	
	g/l	27.2	23.1	31.3	2.05	4.10	Bromocresol Purple
	g/dl	2.72	2.31	3.13	0.21	0.41	
Alkaline Phosphatase	U/l	477	405	549	36.00	72.00	Diethanolamine buffer DEA 37°C
	U/l	371	315	427	28.00	56.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	152	122	182	15.00	30.00	Tris buffer without P5P 37°C
	U/l	151	121	181	15.00	30.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	298	253	343	22.50	45.00	pNP Maltotriose substrates 37°C
	U/l	290	247	333	21.50	43.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	290	247	333	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	285	243	327	21.00	42.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	157	125	189	16.00	32.00	Tris buffer without P5P 37°C
	U/l	155	124	186	15.50	31.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	17.9	14.2	21.6	1.85	3.70	Enzymatic
Bilirubin Direct	µmol/l	24.1	19.0	29.2	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.41	1.11	1.71	0.15	0.30	
	µmol/l	24.8	19.6	30.0	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
Bilirubin Total	µmol/l	90.0	71.1	109	9.45	18.90	Diazo with Dichloroaniline (DCA)
	mg/dl	5.27	4.16	6.38	0.56	1.11	

## Beckman Coulter AU Series®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Bilirubin Total	µmol/l	87.0	68.8	105	9.10	18.20	Diazo with Sulphanilic Acid	
	mg/dl	5.09	4.02	6.16	0.54	1.07		
	µmol/l	86.0	68.0	104	9.00	18.00	Dichlorophenyl Diazonium (DPD)	
	mg/dl	5.03	3.98	6.08	0.53	1.05		
	µmol/l	87.0	68.7	105	9.15	18.30	DPD (Beckman AU)	
	mg/dl	5.09	4.02	6.16	0.54	1.07		
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	3.05	2.75	3.35	0.15	0.30	Arsenazo III	
	mg/dl	12.2	11.0	13.4	0.60	1.20		
	Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
	Cholesterol	mmol/l	7.33	6.38	8.28	0.48	0.95	Cholesterol Oxidase
mg/dl		283	246	320	18.50	37.00		
Cholinesterase	U/l	4729	3783	5675	473.00	946.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	511	419	603	46.00	92.00	CK-NAC substrate start (DGKC) 37°C	
	U/l	506	415	597	45.50	91.00	CK-NAC (IFCC) 37°C	
	U/l	502	412	592	45.00	90.00	Beckman CK-NAC (Extinction Coeff) 37°C	
Copper	µmol/l	23.9	19.1	28.7	2.40	4.80	Colorimetric	
	µg/dl	152	121	183	15.50	31.00		
Creatinine	µmol/l	359	287	431	36.00	72.00	Alkaline picrate no deproteinization	
	mg/dl	4.06	3.24	4.88	0.41	0.82		
	µmol/l	388	310	466	39.00	78.00	Enzymatic UV method	
	mg/dl	4.38	3.50	5.26	0.44	0.88		
	µmol/l	390	312	468	39.00	78.00	Creatinine PAP method	
	mg/dl	4.41	3.53	5.29	0.44	0.88		

## Beckman Coulter AU Series®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	364	291	437	36.50	73.00	Jaffe rate blanked
	mg/dl	4.11	3.29	4.93	0.41	0.82	
	µmol/l	368	294	442	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.16	3.32	5.00	0.42	0.84	
	µmol/l	378	303	453	37.50	75.00	IDMS traceable
	mg/dl	4.27	3.42	5.12	0.43	0.85	
D-3-Hydroxybutyrate	mmol/l	1.17	0.99	1.35	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	182	155	209	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	180	153	207	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	182	155	209	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	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	
	mmol/l	16.2	13.8	18.6	1.20	2.40	Glucose oxidase
	mg/dl	292	249	335	21.50	43.00	
HDL - Cholesterol	mmol/l	2.60	2.21	2.99	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	100	85.3	115	7.35	14.70	
	mmol/l	2.61	2.22	3.00	0.20	0.39	Direct Clearance Method
	mg/dl	101	85.7	116	7.65	15.30	
	mmol/l	2.56	2.18	2.94	0.19	0.38	HDL - Ultra
	mg/dl	98.8	84.1	114	7.35	14.70	
Iron	µmol/l	39.9	32.7	47.1	3.60	7.20	Colorimetric with ppt.
	µg/dl	223	183	263	20.00	40.00	
	µmol/l	39.9	32.8	47.0	3.55	7.10	Colorimetric without ppt.
	µg/dl	223	183	263	20.00	40.00	

## Beckman Coulter AU Series®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	5.45	4.47	6.43	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.1	40.3	57.9	4.40	8.80	
LD (LDH)	U/l	351	299	403	26.00	52.00	L->P 37°C
	U/l	794	675	913	59.50	119.00	P->L Scandinavian & Dutch 37°C
	U/l	359	305	413	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	67	54	80	6.50	13.00	Other Colorimetric 37°C
	U/l	57	46	68	5.50	11.00	Roche Colorimetric 37°C
	U/l	86	69	103	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.06	1.81	2.31	0.13	0.25	Spectrophotometric
	mg/dl	1.43	1.26	1.60	0.09	0.17	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Osmolality	mOsm/kg	353	282	424	35.50	71.00	Calculated
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	
Potassium	mmol/l	6.24	5.74	6.74	0.25	0.50	ISE method - indirect
Protein Total	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point
	g/dl	4.40	3.52	5.28	0.44	0.88	
	g/l	43.7	34.9	52.5	4.40	8.80	Biuret reaction kinetic
	g/dl	4.37	3.49	5.25	0.44	0.88	
Sodium	mmol/l	164	155	173	4.50	9.00	ISE method - indirect
TIBC	µmol/l	48.1	38.0	58.2	5.05	10.10	FE+UIBC(saturation with iron)
	µg/dl	269	212	326	28.50	57.00	
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	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

## Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.83	2.37	3.29	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease end point
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.60	0.52	0.68	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.1	8.75	11.5	0.68	1.35	
	mmol/l	0.60	0.52	0.67	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.0	8.74	11.3	0.63	1.26	
	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.91	8.62	11.2	0.65	1.29	



## Beckman CX4/5/7/9/LX20®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	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	336	285	387	25.50	51.00	p-Nitrophenylphosphate AMP 37°C
	U/l	316	269	363	23.50	47.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
Amylase Total	U/l	302	256	348	23.00	46.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	143	115	171	14.00	28.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.0	13.5	20.5	1.75	3.50	Differential rate pH change
Bilirubin Direct	µmol/l	16.4	12.9	19.9	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.959	0.755	1.16	0.10	0.20	
Bilirubin Total	µmol/l	87.1	68.8	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.10	4.02	6.18	0.54	1.08	
Calcium	mmol/l	2.95	2.65	3.25	0.15	0.30	Ion selective electrode
	mg/dl	11.8	10.6	13.0	0.60	1.20	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.24	6.30	8.18	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	
CK Total	U/l	509	417	601	46.00	92.00	Monothioglycerol 37°C
Creatinine	µmol/l	385	308	462	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.35	3.48	5.22	0.44	0.87	

## Beckman CX4/5/7/9/LX20®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	383	306	460	38.50	77.00	Jaffe rate blanked
	mg/dl	4.33	3.46	5.20	0.44	0.87	
	µmol/l	379	303	455	38.00	76.00	IDMS traceable
	mg/dl	4.28	3.42	5.14	0.43	0.86	
gamma-GT	U/l	149	127	171	11.00	22.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Hexokinase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.60	2.21	2.99	0.20	0.39	Direct HDL PPD
	mg/dl	100	85.3	115	7.35	14.70	
Iron	µmol/l	40.1	32.9	47.3	3.60	7.20	Colorimetric without ppt.
	µg/dl	224	184	264	20.00	40.00	
Lactate	mmol/l	5.11	4.19	6.03	0.46	0.92	Colorimetric Lactate Oxidase
	mg/dl	46.0	37.8	54.2	4.10	8.20	
LD (LDH)	U/l	300	255	345	22.50	45.00	L->P 37°C
Lipase	U/l	76	61	91	7.50	15.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Calmagite
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.23	5.74	6.72	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.8	35.1	52.5	4.35	8.70	Biuret reaction CX4/5/7
	g/dl	4.38	3.51	5.25	0.44	0.87	

## Beckman CX4/5/7/9/LX20®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	43.6	34.9	52.3	4.35	8.70	Biuret reaction end point
	g/dl	4.36	3.49	5.23	0.44	0.87	
	g/l	41.9	33.5	50.3	4.20	8.40	Biuret reaction kinetic
	g/dl	4.19	3.35	5.03	0.42	0.84	
Sodium	mmol/l	163	155	171	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	251	211	291	20.00	40.00	
	mmol/l	2.92	2.46	3.38	0.23	0.46	L/G Kinase EP. no correction
	mg/dl	258	218	298	20.00	40.00	
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	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.48	8.23	10.7	0.63	1.25	

## Beckman DxC600/800®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	28.3	24.0	32.6	2.15	4.30	Bromocresol Purple
	g/dl	2.83	2.40	3.26	0.22	0.43	
Alkaline Phosphatase	U/l	335	285	385	25.00	50.00	p-Nitrophenylphosphate AMP 37°C
	U/l	326	277	375	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	323	275	371	24.00	48.00	AMP non-optimised 37°C
ALT (GPT)	U/l	142	113	171	14.50	29.00	Tris buffer without P5P 37°C
	U/l	136	109	163	13.50	27.00	Tris buffer SCE 37°C
Amylase Total	U/l	302	257	347	22.50	45.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
	U/l	140	112	168	14.00	28.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Differential rate pH change
Bilirubin Direct	µmol/l	16.3	12.9	19.7	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.954	0.755	1.15	0.10	0.20	
Bilirubin Total	µmol/l	87.1	68.8	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.10	4.02	6.18	0.54	1.08	
Calcium	mmol/l	2.95	2.66	3.24	0.15	0.29	Ion selective electrode
	mg/dl	11.8	10.7	12.9	0.55	1.10	
Chloride	mmol/l	116	107	125	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.24	6.30	8.18	0.47	0.94	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	

## Beckman DxC600/800®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	504	413	595	45.50	91.00	Monothioglycerol 37°C
	U/l	484	397	571	43.50	87.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	380	304	456	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.29	3.44	5.14	0.43	0.85	
	µmol/l	378	303	453	37.50	75.00	Jaffe rate blanked
	mg/dl	4.27	3.42	5.12	0.43	0.85	
	µmol/l	379	303	455	38.00	76.00	IDMS traceable
mg/dl	4.28	3.42	5.14	0.43	0.86		
gamma-GT	U/l	148	126	170	11.00	22.00	Gamma glutamyl-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	15.5	13.2	17.8	1.15	2.30	Oxygen electrode
	mg/dl	279	238	320	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
mg/dl	278	236	320	21.00	42.00		
HDL - Cholesterol	mmol/l	2.61	2.22	3.00	0.20	0.39	Direct HDL PPD
	mg/dl	101	85.7	116	7.65	15.30	
	mmol/l	2.54	2.16	2.92	0.19	0.38	HDL - Ultra
	mg/dl	98.0	83.4	113	7.30	14.60	
Iron	µmol/l	39.5	32.4	46.6	3.55	7.10	Colorimetric without ppt.
	µg/dl	221	181	261	20.00	40.00	
Lactate	mmol/l	5.10	4.19	6.01	0.46	0.91	Colorimetric Lactate Oxidase
	mg/dl	46.0	37.8	54.2	4.10	8.20	
LD (LDH)	U/l	297	252	342	22.50	45.00	L->P 37°C

## Beckman DxC600/800®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	948	806	1090	71.00	142.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	294	250	338	22.00	44.00	L->P IFCC 37°C
Lipase	U/l	76	61	91	7.50	15.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Calmagite
	mg/dl	4.08	3.60	4.56	0.24	0.48	
Phosphate Inorganic	mmol/l	2.22	1.89	2.55	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.88	5.86	7.90	0.51	1.02	
	mmol/l	2.27	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	6.23	5.73	6.73	0.25	0.50	ISE method - indirect
Protein Total	g/l	43.6	34.9	52.3	4.35	8.70	Biuret reaction end point
	g/dl	4.36	3.49	5.23	0.44	0.87	
	g/l	42.1	33.7	50.5	4.20	8.40	Biuret reaction kinetic
	g/dl	4.21	3.37	5.05	0.42	0.84	
Sodium	mmol/l	163	154	172	4.50	9.00	ISE method - indirect
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	2.92	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	19.7	16.8	22.6	1.45	2.90	Urease end point
	mg/dl	118	101	135	8.50	17.00	
	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
	mg/dl	56.1	47.7	64.5	4.20	8.40	

**Beckman DxC600/800®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

## Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	

## BIOSYSTEMS A15

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Green
	g/dl	2.93	2.49	3.37	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	167	134	200	16.50	33.00	Tris buffer without P5P 37°C
	U/l	124	99	149	12.50	25.00	Tris buffer without P5P 30°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	164	131	197	16.50	33.00	Tris buffer without P5P 37°C
	U/l	111	89	133	11.00	22.00	Tris buffer without P5P 30°C
	U/l	78	62	94	8.00	16.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	88.4	69.9	107	9.25	18.50	Diazo with Sulphanilic Acid
	mg/dl	5.17	4.09	6.25	0.54	1.08	
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	
Cholesterol	mmol/l	7.35	6.39	8.31	0.48	0.96	Cholesterol Oxidase
	mg/dl	284	247	321	18.50	37.00	
Glucose	mmol/l	16.4	13.9	18.9	1.25	2.50	Glucose oxidase
	mg/dl	296	250	342	23.00	46.00	
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	



**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

## Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	246	206	286	20.00	40.00	
Urea	mmol/l	17.8	15.1	20.5	1.35	2.70	Urease kinetic
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	17.8	15.1	20.5	1.35	2.70	BUN
	mg/dl	50.0	42.5	57.5	3.75	7.50	
Uric Acid (Urate)	mmol/l	0.61	0.53	0.69	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.2	8.89	11.5	0.65	1.31	

## BIOSYSTEMS A25

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.0	24.7	33.3	2.15	4.30	Bromocresol Green
	g/dl	2.90	2.47	3.33	0.22	0.43	
Alkaline Phosphatase	U/l	304	258	350	23.00	46.00	AMP optimised to IFCC 37°C
	U/l	237	201	273	18.00	36.00	AMP optimised to IFCC 30°C
	U/l	194	165	223	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	153	123	183	15.00	30.00	Tris buffer without P5P 37°C
	U/l	103	83	123	10.00	20.00	Tris buffer without P5P 30°C
	U/l	73	59	87	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	88.7	70.0	107	9.35	18.70	Diazo with Sulphanilic Acid
	mg/dl	5.19	4.10	6.28	0.55	1.09	
Cholesterol	mmol/l	7.56	6.57	8.55	0.50	0.99	Cholesterol Oxidase
	mg/dl	292	254	330	19.00	38.00	
Glucose	mmol/l	16.5	14.1	18.9	1.20	2.40	Glucose oxidase
	mg/dl	297	254	340	21.50	43.00	
Protein Total	g/l	43.9	35.1	52.7	4.40	8.80	Biuret reaction end point
	g/dl	4.39	3.51	5.27	0.44	0.88	
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	

**BIOSYSTEMS A25**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	18.0	15.3	20.7	1.35	2.70	Urease kinetic
	mg/dl	108	92.0	124	8.00	16.00	
	mmol/l	18.0	15.3	20.7	1.35	2.70	BUN
	mg/dl	50.5	42.9	58.1	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.68	8.42	10.9	0.63	1.26	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
ALT (GPT)	U/l	149	119	179	15.00	30.00	Tris buffer without P5P 37°C
	U/l	110	88	132	11.00	22.00	Tris buffer without P5P 30°C
	U/l	84	67	101	8.50	17.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	150	120	180	15.00	30.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	71	57	85	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	75.0	59.2	90.8	7.90	15.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.39	3.46	5.32	0.47	0.93	
Calcium	mmol/l	3.01	2.70	3.32	0.16	0.31	Arsenazo III
	mg/dl	12.1	10.8	13.4	0.65	1.30	
Cholesterol	mmol/l	7.14	6.21	8.07	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
Creatinine	µmol/l	378	303	453	37.50	75.00	Creatinine PAP method
	mg/dl	4.27	3.42	5.12	0.43	0.85	
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
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	
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	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	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.27	10.7	0.61	1.22	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
	g/l	26.5	22.5	30.5	2.00	4.00	Turbidimetric Assays
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	280	238	322	21.00	42.00	Roche Integra AMP buffer 37°C
	U/l	218	185	251	16.50	33.00	Roche Integra AMP buffer 30°C
	U/l	179	152	206	13.50	27.00	Roche Integra AMP buffer 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	274	233	315	20.50	41.00	Roche EPS Liquid 37°C
Amylase Total	U/l	288	244	332	22.00	44.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	286	244	328	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
	U/l	99	79	119	10.00	20.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Colorimetric
	mmol/l	16.7	13.3	20.1	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	30.2	23.8	36.6	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.77	1.39	2.15	0.19	0.38	
	µmol/l	31.1	24.5	37.7	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.82	1.43	2.21	0.20	0.39	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	30.1	23.8	36.4	3.15	6.30	Roche JG factored
	mg/dl	1.76	1.39	2.13	0.19	0.37	
Bilirubin Total	µmol/l	78.7	62.1	95.3	8.30	16.60	Diazo with Dichloroaniline (DCA)
	mg/dl	4.60	3.63	5.57	0.49	0.97	
	µmol/l	79.3	62.7	95.9	8.30	16.60	Diazo with Sulphanilic Acid
	mg/dl	4.64	3.67	5.61	0.49	0.97	
	µmol/l	78.8	62.3	95.3	8.25	16.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.61	3.64	5.58	0.49	0.97	
	µmol/l	78.8	62.3	95.3	8.25	16.50	Diazonium ion
	mg/dl	4.61	3.64	5.58	0.49	0.97	
Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.0	13.6	0.65	1.30	
	mmol/l	3.07	2.77	3.37	0.15	0.30	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.03	6.12	7.94	0.46	0.91	Cholesterol Oxidase
	mg/dl	271	236	306	17.50	35.00	
CK Total	U/l	468	384	552	42.00	84.00	CK-NAC (IFCC) 37°C
	U/l	293	240	346	26.50	53.00	CK-NAC (IFCC) 30°C
	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	372	298	446	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.20	3.37	5.03	0.42	0.83	
	µmol/l	378	302	454	38.00	76.00	Enzymatic UV method
	mg/dl	4.27	3.41	5.13	0.43	0.86	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Creatinine	µmol/l	379	304	454	37.50	75.00	Roche Creatinine Plus	
	mg/dl	4.28	3.44	5.12	0.42	0.84		
	µmol/l	372	298	446	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	4.20	3.37	5.03	0.42	0.83		
Creatinine	µmol/l	371	297	445	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)	
	mg/dl	4.19	3.36	5.02	0.42	0.83		
	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	
gamma-GT	U/l	183	155	211	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C	
	U/l	144	122	166	11.00	22.00	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	16.1	13.7	18.5	1.20	2.40	Hexokinase	
	mg/dl	290	247	333	21.50	43.00		
	mmol/l	16.2	13.8	18.6	1.20	2.40	Glucose oxidase	
Glucose	mg/dl	292	249	335	21.50	43.00		
	HDL - Cholesterol	mmol/l	3.12	2.66	3.58	0.23	0.46	Direct HDL Roche 3rd generation
		mg/dl	120	103	137	8.50	17.00	
HDL - Cholesterol	mmol/l	3.46	2.94	3.98	0.26	0.52	Direct HDL Roche 4th Generation	
	mg/dl	134	113	155	10.50	21.00		
Iron	µmol/l	39.4	32.3	46.5	3.55	7.10	Colorimetric with ppt.	
	µg/dl	220	181	259	19.50	39.00		
	µmol/l	39.5	32.4	46.6	3.55	7.10	Colorimetric without ppt.	
	µg/dl	221	181	261	20.00	40.00		
Lactate	mmol/l	5.71	4.68	6.74	0.52	1.03	Colorimetric Lactate Oxidase	
	mg/dl	51.4	42.2	60.6	4.60	9.20		



## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	676	575	777	50.50	101.00	P->L German methods 37°C
	U/l	488	415	561	36.50	73.00	P->L German methods 30°C
	U/l	343	292	394	25.50	51.00	P->L German methods 25°C
	U/l	374	318	430	28.00	56.00	L->P IFCC 37°C
	U/l	270	230	310	20.00	40.00	L->P IFCC 30°C
	U/l	190	161	219	14.50	29.00	L->P IFCC 25°C
Lipase	U/l	64	51	77	6.50	13.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.09	1.84	2.34	0.13	0.25	Ion selective electrode
	mg/dl	1.45	1.28	1.62	0.09	0.17	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	7.07	6.01	8.13	0.53	1.06	
	mmol/l	2.27	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	6.30	5.79	6.81	0.26	0.51	ISE method - indirect
Protein Total	g/l	41.4	33.2	49.6	4.10	8.20	Biuret reaction end point
	g/dl	4.14	3.32	4.96	0.41	0.82	
	g/l	43.0	34.4	51.6	4.30	8.60	Biuret reaction kinetic
	g/dl	4.30	3.44	5.16	0.43	0.86	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	267	211	323	28.00	56.00	
Triglycerides	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	210	290	20.00	40.00	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	251	211	291	20.00	40.00	
	mmol/l	2.82	2.37	3.27	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	250	210	290	20.00	40.00	
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease kinetic
	mg/dl	115	97.4	133	8.80	17.60	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.86	8.57	11.2	0.65	1.29	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.84	8.57	11.1	0.64	1.27	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.83	8.55	11.1	0.64	1.28	

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Alkaline Phosphatase	U/l	429	365	493	32.00	64.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	152	121	183	15.50	31.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	85.7	67.7	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.01	3.96	6.06	0.53	1.05	
Cholesterol	mmol/l	7.22	6.29	8.15	0.47	0.93	Cholesterol Oxidase
	mg/dl	279	243	315	18.00	36.00	
Creatinine	µmol/l	365	292	438	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.12	3.30	4.94	0.41	0.82	
Glucose	mmol/l	16.1	13.7	18.5	1.20	2.40	Glucose oxidase
	mg/dl	290	247	333	21.50	43.00	
Protein Total	g/l	47.4	37.9	56.9	4.75	9.50	Biuret reaction end point
	g/dl	4.74	3.79	5.69	0.48	0.95	
Triglycerides	mmol/l	2.69	2.26	3.12	0.22	0.43	Lipase/GPO-PAP no correction
	mg/dl	238	200	276	19.00	38.00	
Urea	mmol/l	18.3	15.5	21.1	1.40	2.80	Urease kinetic
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	18.3	15.6	21.0	1.35	2.70	BUN
	mg/dl	51.4	43.7	59.1	3.85	7.70	
Uric Acid (Urate)	mmol/l	0.60	0.52	0.68	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.1	8.80	11.4	0.65	1.30	

## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	24.0	16.1	31.9	3.95	7.90	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	263	223	303	20.00	40.00	Roche Integra AMP buffer 37°C
	U/l	205	174	236	15.50	31.00	Roche Integra AMP buffer 30°C
	U/l	168	142	194	13.00	26.00	Roche Integra AMP buffer 25°C
	U/l	317	269	365	24.00	48.00	Randox AMP 37°C
	U/l	247	210	284	18.50	37.00	Randox AMP 30°C
	U/l	203	172	234	15.50	31.00	Randox AMP 25°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	107	86	128	10.50	21.00	Tris buffer without P5P 30°C
	U/l	82	65	99	8.50	17.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	292	248	336	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	274	233	315	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	310	264	356	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	18.4	14.6	22.2	1.90	3.80	Enzymatic
Bile Acids	µmol/l	43.3	34.6	52.0	4.35	8.70	5th Generation Colorimetric
Bilirubin Total	µmol/l	82.7	65.3	100	8.70	17.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.84	3.82	5.86	0.51	1.02	

## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	3.13	2.81	3.45	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.01	2.71	3.31	0.15	0.30	NM-BAPTA
	mg/dl	12.1	10.9	13.3	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.10	6.17	8.03	0.47	0.93	Cholesterol Oxidase
	mg/dl	274	238	310	18.00	36.00	
CK Total	U/l	480	393	567	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	300	246	354	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	393	315	471	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.44	3.56	5.32	0.44	0.88	
	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	159	135	183	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	125	106	144	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	98	83	113	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	97	133	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	192	163	221	14.50	29.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	151	128	174	11.50	23.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	118	101	135	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	

## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
HDL - Cholesterol	mmol/l	2.88	2.45	3.31	0.22	0.43	Direct HDL Roche 3rd generation
	mg/dl	111	94.6	127	8.20	16.40	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.21	1.87	2.55	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.85	5.80	7.90	0.53	1.05	
Potassium	mmol/l	6.28	5.77	6.79	0.26	0.51	ISE method - indirect
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Biuret reaction end point
	g/dl	4.51	3.61	5.41	0.45	0.90	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.92	2.45	3.39	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	258	217	299	20.50	41.00	
Urea	mmol/l	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	0.57	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.61	8.35	10.9	0.63	1.26	

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.8	24.5	33.1	2.15	4.30	Bromocresol Green
	g/dl	2.88	2.45	3.31	0.22	0.43	
Alkaline Phosphatase	U/l	343	292	394	25.50	51.00	AMP optimised to IFCC 37°C
	U/l	267	227	307	20.00	40.00	AMP optimised to IFCC 30°C
	U/l	219	187	251	16.00	32.00	AMP optimised to IFCC 25°C
AST (GOT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	97	78	116	9.50	19.00	Tris buffer without P5P 30°C
	U/l	69	55	83	7.00	14.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	91.4	72.2	111	9.60	19.20	Diazo with Sulphanilic Acid
	mg/dl	5.35	4.22	6.48	0.57	1.13	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.25	6.31	8.19	0.47	0.94	Cholesterol Oxidase
	mg/dl	280	244	316	18.00	36.00	
CK Total	U/l	450	369	531	40.50	81.00	CK-NAC (IFCC) 37°C
	U/l	282	231	333	25.50	51.00	CK-NAC (IFCC) 30°C
	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	346	277	415	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.91	3.13	4.69	0.39	0.78	
gamma-GT	U/l	172	146	198	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	136	115	157	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	90	122	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	14.9	12.6	17.2	1.15	2.30	Glucose oxidase
	mg/dl	268	227	309	20.50	41.00	
HDL - Cholesterol	mmol/l	2.22	1.89	2.55	0.17	0.33	Direct HDL Immunoseparation
	mg/dl	85.7	73.0	98.4	6.35	12.70	
Protein Total	g/l	46.3	37.0	55.6	4.65	9.30	Biuret reaction end point
	g/dl	4.63	3.70	5.56	0.47	0.93	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
Urea	mmol/l	18.4	15.7	21.1	1.35	2.70	Urease kinetic
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	18.4	15.6	21.2	1.40	2.80	BUN
	mg/dl	51.6	43.9	59.3	3.85	7.70	




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

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.1	23.9	32.3	2.10	4.20	Bromocresol Green
	g/dl	2.81	2.39	3.23	0.21	0.42	
Alkaline Phosphatase	U/l	478	406	550	36.00	72.00	Diethanolamine buffer DEA 37°C
	U/l	372	316	428	28.00	56.00	Diethanolamine buffer DEA 30°C
	U/l	305	259	351	23.00	46.00	Diethanolamine buffer DEA 25°C
	U/l	319	271	367	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	249	211	287	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	204	173	235	15.50	31.00	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	166	133	199	16.50	33.00	Tris buffer without P5P 37°C
	U/l	112	90	134	11.00	22.00	Tris buffer without P5P 30°C
	U/l	79	63	95	8.00	16.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	44.3	35.4	53.2	4.45	8.90	Enzymatic Colorimetric
Bilirubin Total	µmol/l	82.3	65.0	99.6	8.65	17.30	Diazo with Sulphanilic Acid
	mg/dl	4.81	3.80	5.82	0.51	1.01	
	µmol/l	79.4	62.7	96.1	8.35	16.70	Nitrobenzenediazonium salt
	mg/dl	4.64	3.67	5.61	0.49	0.97	
Calcium	mmol/l	3.16	2.84	3.48	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.4	14.0	0.65	1.30	

## Konelab 20/30/60®/Thermo Scientific Indiko Plus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	118	108	128	5.00	10.00	ISE direct
Cholesterol	mmol/l	7.05	6.14	7.96	0.46	0.91	Cholesterol Oxidase
	mg/dl	272	237	307	17.50	35.00	
CK Total	U/l	484	397	571	43.50	87.00	CK-NAC (IFCC) 37°C
	U/l	303	249	357	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	206	169	243	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	366	292	440	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.14	3.30	4.98	0.42	0.84	
	µmol/l	384	307	461	38.50	77.00	Creatinine PAP method
	mg/dl	4.34	3.47	5.21	0.44	0.87	
gamma-GT	U/l	173	147	199	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	136	116	156	10.00	20.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	107	91	123	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	15.7	13.3	18.1	1.20	2.40	Glucose oxidase
	mg/dl	283	240	326	21.50	43.00	
HDL - Cholesterol	mmol/l	3.03	2.57	3.49	0.23	0.46	Direct HDL PEGME
	mg/dl	117	99.2	135	8.90	17.80	
Iron	µmol/l	40.1	32.9	47.3	3.60	7.20	Colorimetric without ppt.
	µg/dl	224	184	264	20.00	40.00	
LD (LDH)	U/l	680	578	782	51.00	102.00	P->L SFBC 37°C
	U/l	491	417	565	37.00	74.00	P->L SFBC 30°C
	U/l	345	293	397	26.00	52.00	P->L SFBC 25°C
Magnesium	mmol/l	1.67	1.47	1.87	0.10	0.20	Xylidyl Blue
	mg/dl	4.06	3.57	4.55	0.25	0.49	

**Konelab 20/30/60®/Thermo Scientific Indiko Plus**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	2.30	1.95	2.65	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.13	6.05	8.21	0.54	1.08	
Potassium	mmol/l	6.07	5.58	6.56	0.25	0.49	ISE method - direct
Protein Total	g/l	44.9	35.9	53.9	4.50	9.00	Biuret reaction end point
	g/dl	4.49	3.59	5.39	0.45	0.90	
Sodium	mmol/l	159	151	167	4.00	8.00	ISE method - direct
Triglycerides	mmol/l	2.84	2.38	3.30	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	251	211	291	20.00	40.00	
Urea	mmol/l	18.6	15.8	21.4	1.40	2.80	Urease kinetic
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	18.6	15.8	21.4	1.40	2.80	BUN
	mg/dl	52.2	44.4	60.0	3.90	7.80	
Uric Acid (Urate)	mmol/l	0.60	0.53	0.68	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.1	8.84	11.4	0.63	1.26	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.86	8.58	11.1	0.64	1.28	
	mmol/l	0.59	0.51	0.67	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
mg/dl	9.88	8.58	11.2	0.65	1.30		

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	405	320	490	42.50	85.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	306	242	370	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	24.0	16.1	31.9	3.95	7.90	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	29.1	24.8	33.4	2.15	4.30	Bromocresol Green
	g/dl	2.91	2.48	3.34	0.22	0.43	
	g/l	27.3	23.2	31.4	2.05	4.10	Bromocresol Purple
	g/dl	2.73	2.32	3.14	0.21	0.41	
	g/l	27.4	23.3	31.5	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.74	2.33	3.15	0.21	0.41	
	g/l	26.4	22.5	30.3	1.95	3.90	Turbidimetric Assays
g/dl	2.64	2.25	3.03	0.20	0.39		
Alkaline Phosphatase	U/l	244	207	281	18.50	37.00	Ortho Vitros Microslide Systems 37°C
	U/l	473	402	544	35.50	71.00	Diethanolamine buffer DEA 37°C
	U/l	368	313	423	27.50	55.00	Diethanolamine buffer DEA 30°C
	U/l	302	257	347	22.50	45.00	Diethanolamine buffer DEA 25°C
	U/l	321	273	369	24.00	48.00	AMP optimised to IFCC 37°C
	U/l	250	213	287	18.50	37.00	AMP optimised to IFCC 30°C
	U/l	205	174	236	15.50	31.00	AMP optimised to IFCC 25°C
	U/l	308	262	354	23.00	46.00	AMP non-optimised 37°C
	U/l	240	204	276	18.00	36.00	AMP non-optimised 30°C
U/l	197	167	227	15.00	30.00	AMP non-optimised 25°C	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
ALT (GPT)	U/l	158	126	190	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	152	122	182	15.00	30.00	Tris buffer with P5P 37°C
	U/l	112	90	134	11.00	22.00	Tris buffer with P5P 30°C
	U/l	86	69	103	8.50	17.00	Tris buffer with P5P 25°C
	U/l	145	116	174	14.50	29.00	Tris buffer without P5P 37°C
	U/l	107	86	128	10.50	21.00	Tris buffer without P5P 30°C
	U/l	82	65	99	8.50	17.00	Tris buffer without P5P 25°C
	U/l	136	109	163	13.50	27.00	Tris buffer SCE 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer SCE 30°C
Amylase Pancreatic	U/l	260	221	299	19.50	39.00	Immunoinhibition EPS substrate 37°C
	U/l	257	219	295	19.00	38.00	Roche EPS Liquid 37°C
	U/l	292	248	336	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	301	256	346	22.50	45.00	pNP Maltotrioxide substrates 37°C
	U/l	293	249	337	22.00	44.00	Siemens - blocked pNPG7 37°C
	U/l	237	201	273	18.00	36.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	312	266	358	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	276	234	318	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	292	248	336	22.00	44.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	349	297	401	26.00	52.00	Siemens - maltopenta/hexaoside 37°C
	U/l	270	229	311	20.50	41.00	Saccharogenic 37°C
	U/l	283	241	325	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	280	238	322	21.00	42.00	Other Roche 2-chloro-pNPG7 37°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	278	236	320	21.00	42.00	Roche liquid stable pNPG7 37°C
	U/l	354	301	407	26.50	53.00	Siemens 2-chloro-pNPG3 37°C
	U/l	290	247	333	21.50	43.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	302	257	347	22.50	45.00	Beckman Synchron AMY7 37°C
	U/l	324	275	373	24.50	49.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	360	306	414	27.00	54.00	Abbott Architect IFCC Cal. 37°C
	U/l	285	243	327	21.00	42.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	0.96	0.79	1.14	0.09	0.17	Immunoturbidimetric
	mg/dl	96.2	78.9	114	8.65	17.30	
Apolipoprotein B	g/l	0.57	0.46	0.67	0.05	0.10	Immunoturbidimetric
	mg/dl	56.6	46.4	66.8	5.10	10.20	
AST (GOT)	U/l	191	152	230	19.50	39.00	Ortho Vitros Microslide visible slide 37°C
	U/l	148	118	178	15.00	30.00	Tris buffer with P5P 37°C
	U/l	100	80	120	10.00	20.00	Tris buffer with P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer with P5P 25°C
	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
	U/l	140	112	168	14.00	28.00	Tris buffer SCE 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer SCE 30°C
U/l	67	53	81	7.00	14.00	Tris buffer SCE 25°C	
Bicarbonate	mmol/l	17.1	13.6	20.6	1.75	3.50	Colorimetric
	mmol/l	16.8	13.3	20.3	1.75	3.50	Differential rate pH change
	mmol/l	17.2	13.7	20.7	1.75	3.50	Enzymatic
	mmol/l	17.4	13.8	21.0	1.80	3.60	Ion selective electrode

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	45.4	36.3	54.5	4.55	9.10	4th Generation Colorimetric
	µmol/l	43.3	34.6	52.0	4.35	8.70	5th Generation Colorimetric
Bilirubin Direct	µmol/l	28.1	22.2	34.0	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	31.1	24.6	37.6	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.82	1.44	2.20	0.19	0.38	
	µmol/l	28.8	22.8	34.8	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	30.8	24.3	37.3	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Bilirubin Total	µmol/l	31.1	24.6	37.6	3.25	6.50	Modified Jendrassik
	mg/dl	1.82	1.44	2.20	0.19	0.38	
	µmol/l	83.1	65.7	101	8.70	17.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.86	3.84	5.88	0.51	1.02	
	µmol/l	83.6	66.0	101	8.80	17.60	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.89	3.86	5.92	0.52	1.03	
	µmol/l	94.5	74.7	114	9.90	19.80	Diazo with Dichloroaniline (DCA)
	mg/dl	5.53	4.37	6.69	0.58	1.16	
	µmol/l	86.0	68.0	104	9.00	18.00	Diazo with Sulphanilic Acid
	mg/dl	5.03	3.98	6.08	0.53	1.05	
	µmol/l	81.0	64.0	98.0	8.50	17.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.74	3.74	5.74	0.50	1.00	
	µmol/l	79.4	62.7	96.1	8.35	16.70	Nitrobenzenediazonium salt
	mg/dl	4.64	3.67	5.61	0.49	0.97	
µmol/l	82.7	65.3	100	8.70	17.40	Diazonium ion	
mg/dl	4.84	3.82	5.86	0.51	1.02		

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	96.4	76.2	117	10.10	20.20	Oxidation to Biliverdin/Vanadate
	mg/dl	5.64	4.46	6.82	0.59	1.18	
	µmol/l	101	79.8	122	10.60	21.20	Modified Jendrassik
	mg/dl	5.91	4.67	7.15	0.62	1.24	
Calcium	mmol/l	3.05	2.74	3.36	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.2	11.0	13.4	0.60	1.20	
	mmol/l	3.06	2.75	3.37	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.3	11.0	13.6	0.65	1.30	
	mmol/l	2.95	2.66	3.24	0.15	0.29	Ion selective electrode
	mg/dl	11.8	10.7	12.9	0.55	1.10	
	mmol/l	3.07	2.77	3.37	0.15	0.30	Methylthymol blue
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.06	2.76	3.36	0.15	0.30	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.07	2.77	3.37	0.15	0.30	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	1.13	1.02	1.24	0.05	0.11	Ionised calcium
	mg/dl	4.53	4.09	4.97	0.22	0.44	
Chloride	mmol/l	111	102	120	4.50	9.00	Colorimetric
	mmol/l	118	108	128	5.00	10.00	Ortho Vitros Microslide Systems
	mmol/l	116	107	125	4.50	9.00	ISE indirect
	mmol/l	116	107	125	4.50	9.00	ISE direct
Cholesterol	mmol/l	6.71	5.84	7.58	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	259	225	293	17.00	34.00	



## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	7.14	6.21	8.07	0.47	0.93	Cholesterol Oxidase
	mg/dl	276	240	312	18.00	36.00	
Cholinesterase	U/l	4896	3917	5875	489.50	979.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	410	336	484	37.00	74.00	Ortho Vitros Microslide Systems 37°C
	U/l	486	399	573	43.50	87.00	CK-NAC serum start (DGKC) 37°C
	U/l	304	250	358	27.00	54.00	CK-NAC serum start (DGKC) 30°C
	U/l	207	170	244	18.50	37.00	CK-NAC serum start (DGKC) 25°C
	U/l	482	395	569	43.50	87.00	CK-NAC substrate start (DGKC) 37°C
	U/l	302	247	357	27.50	55.00	CK-NAC substrate start (DGKC) 30°C
	U/l	205	168	242	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	477	391	563	43.00	86.00	CK-NAC (IFCC) 37°C
	U/l	299	245	353	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 25°C
	U/l	504	413	595	45.50	91.00	Monothioglycerol 37°C
	U/l	316	259	373	28.50	57.00	Monothioglycerol 30°C
	U/l	214	176	252	19.00	38.00	Monothioglycerol 25°C
Copper	µmol/l	26.3	21.1	31.5	2.60	5.20	Atomic absorption
	µg/dl	167	134	200	16.50	33.00	
	µmol/l	25.0	20.0	30.0	2.50	5.00	Colorimetric
	µg/dl	159	127	191	16.00	32.00	
Cortisol	nmol/l	960	720	1200	120.00	240.00	Roche Cobas E411
	µg/dl	34.6	25.9	43.3	4.35	8.70	
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	382	305	459	38.50	77.00	Enzymatic UV method
	mg/dl	4.32	3.45	5.19	0.44	0.87	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	387	310	464	38.50	77.00	Creatinine PAP method
	mg/dl	4.37	3.50	5.24	0.44	0.87	
	µmol/l	377	301	453	38.00	76.00	Jaffe rate blanked
	mg/dl	4.26	3.40	5.12	0.43	0.86	
	µmol/l	383	307	459	38.00	76.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.33	3.47	5.19	0.43	0.86	
	µmol/l	371	297	445	37.00	74.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.19	3.36	5.02	0.42	0.83	
µmol/l	381	305	457	38.00	76.00	Vitros IDMS Traceable	
mg/dl	4.31	3.45	5.17	0.43	0.86		
µmol/l	379	303	455	38.00	76.00	IDMS traceable	
mg/dl	4.28	3.42	5.14	0.43	0.86		
D-3-Hydroxybutyrate	mmol/l	1.17	1.00	1.34	0.09	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.99	3.19	4.79	0.40	0.80	Immunoturbidimetric
	ng/ml	3.12	2.49	3.75	0.32	0.63	
Folate	nmol/l	14.7	11.1	18.2	1.79	3.57	Roche Cobas E411
	ng/ml	6.47	4.90	8.04	0.79	1.57	
Free T4	pmol/l	57.3	43.0	71.6	7.15	14.30	Abbott Architect
	ng/dl	4.47	3.35	5.59	0.56	1.12	
	pg/ml	44.7	33.5	55.9	5.60	11.20	Abbott Architect
	pmol/l	79.2	59.4	99.0	9.90	19.80	
	ng/dl	6.18	4.63	7.73	0.78	1.55	Siemens Centaur XP/XPT/Classic
	pg/ml	61.8	46.3	77.3	7.75	15.50	
	pmol/l	64.7	48.5	80.9	8.10	16.20	Beckman Access
	ng/dl	5.05	3.78	6.32	0.64	1.27	
pg/ml	50.5	37.8	63.2	6.35	12.70	Beckman Access	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	68.2	51.1	85.3	8.55	17.10	Beckman Dxl800
	ng/dl	5.32	3.99	6.65	0.67	1.33	
	pg/ml	53.2	39.9	66.5	6.65	13.30	Beckman Dxl800
	pmol/l	93.4	70.1	117	11.65	23.30	Roche Cobas E411
	ng/dl	7.29	5.47	9.11	0.91	1.82	
	pg/ml	72.9	54.7	91.1	9.10	18.20	Roche Cobas E411
	pmol/l	93.2	69.9	117	11.65	23.30	Roche Cobas 6000/8000
	ng/dl	7.27	5.45	9.09	0.91	1.82	
	pg/ml	72.7	54.5	90.9	9.10	18.20	Roche Cobas 6000/8000
	pmol/l	83.0	62.3	104	10.35	20.70	Biomerieux Vidas FT4N Kit
ng/dl	6.47	4.86	8.08	0.81	1.61		
pg/ml	64.7	48.6	80.8	8.05	16.10	Biomerieux Vidas FT4N Kit	
Gentamicin	µmol/l	20.9	16.7	25.1	2.11	4.22	Immunoturbidimetric
	µg/ml	10.0	7.98	12.0	1.01	2.02	
gamma-GT	U/l	172	146	198	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	136	115	157	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	106	90	122	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	224	190	258	17.00	34.00	Ortho Vitros Microslide Systems 37°C
	U/l	148	126	170	11.00	22.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	117	99	135	9.00	18.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	91	78	104	6.50	13.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	183	155	211	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	144	122	166	11.00	22.00	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

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	192	163	221	14.50	29.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	151	128	174	11.50	23.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	118	101	135	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	14.6	12.4	16.8	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	263	223	303	20.00	40.00	
	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	15.9	13.6	18.2	1.15	2.30	Hexokinase
	mg/dl	287	245	329	21.00	42.00	
	mmol/l	15.6	13.2	18.0	1.20	2.40	Oxygen electrode
	mg/dl	281	238	324	21.50	43.00	
HDL - Cholesterol	mmol/l	2.59	2.20	2.98	0.20	0.39	Direct HDL PPD
	mg/dl	100	84.9	115	7.55	15.10	
	mmol/l	2.58	2.19	2.97	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	99.6	84.5	115	7.55	15.10	
	mmol/l	2.24	1.90	2.58	0.17	0.34	Vitros Magnetic HDL
	mg/dl	86.5	73.3	99.7	6.60	13.20	
	mmol/l	2.98	2.53	3.43	0.23	0.45	Direct HDL PEGME
	mg/dl	115	97.7	132	8.65	17.30	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	2.53	2.15	2.91	0.19	0.38	Direct Clearance Method
	mg/dl	97.7	83.0	112	7.35	14.70	
	mmol/l	2.31	1.97	2.65	0.17	0.34	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	89.2	76.0	102	6.60	13.20	
	mmol/l	3.09	2.62	3.56	0.24	0.47	Direct HDL Roche 3rd generation
	mg/dl	119	101	137	9.00	18.00	
mmol/l	2.45	2.08	2.82	0.19	0.37	HDL - Ultra	
mg/dl	94.6	80.3	109	7.15	14.30		
mmol/l	3.35	2.85	3.85	0.25	0.50	Direct HDL Roche 4th Generation	
mg/dl	129	110	148	9.50	19.00		
Immunoglobulin A	g/l	1.52	1.14	1.90	0.19	0.38	Immunoturbidimetric
	mg/dl	152	114	190	19.00	38.00	
Immunoglobulin G	g/l	6.87	5.63	8.11	0.62	1.24	Immunoturbidimetric
	mg/dl	687	563	811	62.00	124.00	
Immunoglobulin M	g/l	0.81	0.65	0.97	0.08	0.16	Immunoturbidimetric
	mg/dl	80.7	64.6	96.8	8.05	16.10	
Iron	µmol/l	39.6	32.5	46.7	3.55	7.10	Colorimetric with ppt.
	µg/dl	221	182	260	19.50	39.00	
	µmol/l	39.4	32.3	46.5	3.55	7.10	Colorimetric without ppt.
	µg/dl	220	181	259	19.50	39.00	
	µmol/l	41.4	33.9	48.9	3.75	7.50	Ortho Vitros Microslide Systems
	µg/dl	231	190	272	20.50	41.00	
Lactate	mmol/l	5.23	4.29	6.17	0.47	0.94	Ion selective electrode
	mg/dl	47.1	38.7	55.5	4.20	8.40	
	mmol/l	5.56	4.56	6.56	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	50.1	41.1	59.1	4.50	9.00	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	5.05	4.14	5.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.5	37.3	53.7	4.10	8.20	
	mmol/l	5.54	4.54	6.54	0.50	1.00	Enzymatic Electrode
	mg/dl	49.9	40.9	58.9	4.50	9.00	
	mmol/l	5.25	4.31	6.19	0.47	0.94	
mg/dl	47.3	38.8	55.8	4.25	8.50		
LAP	U/l	14	12	16	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	1007	856	1158	75.50	151.00	Ortho Vitros Microslide Systems 37°C
	U/l	324	276	372	24.00	48.00	L->P 37°C
	U/l	234	199	269	17.50	35.00	L->P 30°C
	U/l	164	140	188	12.00	24.00	L->P 25°C
	U/l	791	673	909	59.00	118.00	P->L Scandinavian & Dutch 37°C
	U/l	571	486	656	42.50	85.00	P->L Scandinavian & Dutch 30°C
	U/l	401	341	461	30.00	60.00	P->L Scandinavian & Dutch 25°C
	U/l	695	591	799	52.00	104.00	P->L German methods 37°C
	U/l	502	427	577	37.50	75.00	P->L German methods 30°C
	U/l	352	300	404	26.00	52.00	P->L German methods 25°C
	U/l	692	588	796	52.00	104.00	P->L SFBC 37°C
	U/l	500	425	575	37.50	75.00	P->L SFBC 30°C
	U/l	351	298	404	26.50	53.00	P->L SFBC 25°C
	U/l	362	307	417	27.50	55.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
U/l	184	156	212	14.00	28.00	L->P IFCC 25°C	
Lipase	U/l	68	55	81	6.50	13.00	Other Colorimetric 37°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	745	598	892	73.50	147.00	Ortho Vitros Microslide Systems 37°C
	U/l	61	49	73	6.00	12.00	Roche Colorimetric 37°C
	U/l	88	71	105	8.50	17.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.14	1.88	2.40	0.13	0.26	Ion selective electrode
	mg/dl	1.49	1.31	1.67	0.09	0.18	
	mmol/l	2.07	1.82	2.32	0.13	0.25	Spectrophotometric
	mg/dl	1.44	1.26	1.62	0.09	0.18	
	mmol/l	2.11	1.86	2.36	0.13	0.25	Randox Colorimetric
Magnesium	mmol/l	1.68	1.48	1.88	0.10	0.20	Arsenazo III
	mg/dl	4.08	3.60	4.56	0.24	0.48	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.28	3.77	4.79	0.26	0.51	
	mmol/l	1.68	1.48	1.88	0.10	0.20	Calmagite
	mg/dl	4.08	3.60	4.56	0.24	0.48	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.71	1.51	1.91	0.10	0.20	Methylthymol blue
	mg/dl	4.16	3.67	4.65	0.25	0.49	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.69	1.49	1.89	0.10	0.20	Enzymatic
	mg/dl	4.11	3.62	4.60	0.25	0.49	
NEFA	mmol/l	0.50	0.43	0.58	0.04	0.08	Colorimetric
Osmolality	mOsm/kg	357	286	428	35.50	71.00	Calculated

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Osmolality	mOsm/kg	392	313	471	39.50	79.00	Freezing point depression	
Paracetamol	mmol/l	0.61	0.49	0.73	0.06	0.12	Colorimetric	
	mg/l	92.1	73.7	111	9.20	18.40		
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Ortho Vitros Microslide Systems	
	mg/dl	6.82	5.80	7.84	0.51	1.02		
	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate enzymatic	
	mg/dl	6.85	5.83	7.87	0.51	1.02		
Potassium	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV	
	mg/dl	6.85	5.83	7.87	0.51	1.02		
	Potassium	mmol/l	6.21	5.72	6.70	0.25	0.49	Ortho Vitros Microslide Systems
		mmol/l	6.40	5.89	6.91	0.26	0.51	
mmol/l		6.21	5.71	6.71	0.25	0.50	ISE method - direct	
mmol/l		6.30	5.79	6.81	0.26	0.51	ISE method - indirect	
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Ortho Vitros Microslide Systems	
	g/dl	4.54	3.63	5.45	0.46	0.91		
	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point	
	g/dl	4.40	3.52	5.28	0.44	0.88		
	g/l	43.1	34.5	51.7	4.30	8.60	Biuret reaction kinetic	
	g/dl	4.31	3.45	5.17	0.43	0.86		
PSA Total	ng/ml =	32.6	24.5	40.7	4.05	8.10	Roche Elecsys Modular E170	
	ng/ml =	30.0	22.5	37.5	3.75	7.50	Beckman Access standardised to Hybritech	
	ng/ml =	32.4	24.3	40.5	4.05	8.10	bioMerieux VIDAS TPSA	
	ng/ml =	27.1	20.3	33.9	3.40	6.80	Siemens Centaur XP/XPT/Classic	
	ng/ml =	26.4	19.8	33.0	3.30	6.60	Abbott Architect	
	ng/ml =	32.6	24.4	40.8	4.10	8.20	Cobas E411	



## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	32.1	24.1	40.1	4.00	8.00	Roche Cobas 6000/8000
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	160	152	168	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	162	154	170	4.00	8.00	Enzymatic
	mmol/l	162	154	170	4.00	8.00	ISE method - direct
	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
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 =	0.94	0.75	1.12	0.09	0.19	Abbott Architect
	µU/ml =	1.04	0.83	1.25	0.11	0.21	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.09	0.87	1.31	0.11	0.22	bioMerieux VIDAS TSH
	µU/ml =	1.04	0.84	1.25	0.10	0.21	Vitros ECi
	µU/ml =	1.27	1.02	1.52	0.13	0.25	Roche Elecsys
	µU/ml =	1.25	1.00	1.50	0.13	0.25	Roche Cobas E411
	µU/ml =	1.23	0.98	1.48	0.12	0.25	Roche Cobas 6000/8000
	µU/ml =	1.01	0.81	1.21	0.10	0.20	Beckman Dxl800 Hyper TSH
µU/ml =	0.99	0.79	1.19	0.10	0.20	Siemens Centaur XP/XPT/Classic TSH3-Ultra	
TIBC	µmol/l	47.1	37.2	57.0	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	263	208	318	27.50	55.00	
	µmol/l	44.7	35.3	54.1	4.70	9.40	Direct Colorimetric
	µg/dl	250	197	303	26.50	53.00	
	µmol/l	39.7	31.4	48.0	4.15	8.30	Calculated from Transferrin
	µg/dl	222	176	268	23.00	46.00	
	µmol/l	44.3	35.0	53.6	4.65	9.30	Randox Direct
	µg/dl	248	196	300	26.00	52.00	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	3.43	2.57	4.29	0.43	0.86	Abbott Architect
	ng/ml	2.23	1.67	2.79	0.28	0.56	
	ng/dl	223	167	279	28.00	56.00	Abbott Architect
	nmol/l	4.57	3.43	5.71	0.57	1.14	Roche Cobas E411
	ng/ml	2.98	2.23	3.73	0.38	0.75	Roche Cobas E411
	ng/dl	298	223	373	37.50	75.00	
	nmol/l	4.64	3.48	5.80	0.58	1.16	Roche Cobas 6000/8000
	ng/ml	3.02	2.27	3.77	0.38	0.75	Roche Cobas 6000/8000
ng/dl	302	227	377	37.50	75.00		
Total T4	nmol/l	246	184	308	31.00	62.00	Abbott Architect
	µg/dl	19.2	14.4	24.0	2.40	4.80	Abbott Architect
	ng/ml	192	144	240	24.00	48.00	
	nmol/l	241	180	302	30.50	61.00	Siemens Centaur XP/XPT/Classic
	µg/dl	18.8	14.0	23.6	2.40	4.80	Siemens Centaur XP/XPT/Classic
	ng/ml	188	140	236	24.00	48.00	
	nmol/l	242	181	303	30.50	61.00	Siemens Immulite 2000/2500
	µg/dl	18.9	14.1	23.7	2.40	4.80	Siemens Immulite 2000/2500
	ng/ml	189	141	237	24.00	48.00	
	nmol/l	210	158	262	26.00	52.00	Roche Cobas 6000/8000
µg/dl	16.4	12.3	20.5	2.05	4.10	Roche Cobas 6000/8000	
ng/ml	164	123	205	20.50	41.00		
Transferrin	g/l	1.57	1.26	1.88	0.16	0.31	Immunoturbidimetric
	mg/dl	157	126	188	15.50	31.00	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.80	2.35	3.25	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	248	208	288	20.00	40.00	
	mmol/l	2.81	2.36	3.26	0.23	0.45	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	249	209	289	20.00	40.00	
	mmol/l	2.84	2.39	3.29	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	251	212	290	19.50	39.00	
	mmol/l	2.78	2.33	3.23	0.23	0.45	Lipase/Glycerol Dehydrogenase
	mg/dl	246	206	286	20.00	40.00	
	mmol/l	3.13	2.63	3.63	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	277	233	321	22.00	44.00	
UIBC	µmol/l	7.29	5.98	8.60	0.66	1.31	Direct Colorimetric
	µg/dl	40.8	33.4	48.2	3.70	7.40	
Urea	mmol/l	18.1	15.4	20.8	1.35	2.70	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
	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	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Ortho Vitros Microslide Systems
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.73	8.47	11.0	0.63	1.26	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.69	8.43	11.0	0.63	1.26	
	mmol/l	0.57	0.50	0.64	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.58	8.33	10.8	0.63	1.25	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.63	8.37	10.9	0.63	1.26	
Vitamin B12	pmol/l	234	187	281	23.50	47.00	Roche Cobas E411
	pg/ml	317	253	381	32.00	64.00	
Zinc	µmol/l	39.0	31.2	46.8	3.90	7.80	Colorimetric with deproteinisation
	µg/dl	255	204	306	25.50	51.00	

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		55.6	50.1	61.1	2.75	5.50	% of total Protein (Beckman Capillary)
alpha-1-globulin		8.5	6.5	10.5	1.02	2.04	% of total Protein (Beckman Capillary)
alpha-2-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)
beta-globulin		13.7	10.4	17.0	1.65	3.30	% of total Protein (Beckman Capillary)
gamma-globulin		12.3	9.4	15.3	1.48	2.95	% of total Protein (Beckman Capillary)

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.4	25.8	35.0	2.30	4.60	Bromocresol Green
	g/dl	3.04	2.58	3.50	0.23	0.46	
Alkaline Phosphatase	U/l	329	280	378	24.50	49.00	AMP optimised to IFCC 37°C
	U/l	256	218	294	19.00	38.00	AMP optimised to IFCC 30°C
	U/l	210	179	241	15.50	31.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	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	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
Bilirubin Total	µmol/l	87.5	69.1	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.12	4.04	6.20	0.54	1.08	
	µmol/l	90.7	71.6	110	9.55	19.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.31	4.19	6.43	0.56	1.12	
	µmol/l	90.0	71.1	109	9.45	18.90	Oxidation to Biliverdin/Vanadate
	mg/dl	5.27	4.16	6.38	0.56	1.11	
Calcium	mmol/l	3.12	2.80	3.44	0.16	0.32	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Cholesterol	mmol/l	7.26	6.32	8.20	0.47	0.94	Cholesterol Oxidase
	mg/dl	280	244	316	18.00	36.00	

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5032	4026	6038	503.00	1006.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	490	402	578	44.00	88.00	CK-NAC (IFCC) 37°C
	U/l	307	252	362	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	208	171	245	18.50	37.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	357	286	428	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.03	3.23	4.83	0.40	0.80	
	µmol/l	390	312	468	39.00	78.00	Jaffe rate blanked
	mg/dl	4.41	3.53	5.29	0.44	0.88	
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	180	153	207	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	142	121	163	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	111	94	128	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	16.1	13.6	18.6	1.25	2.50	Hexokinase
	mg/dl	290	245	335	22.50	45.00	
	mmol/l	16.1	13.7	18.5	1.20	2.40	Glucose oxidase
	mg/dl	290	247	333	21.50	43.00	
HDL - Cholesterol	mmol/l	2.44	2.07	2.81	0.19	0.37	Direct HDL PPD
	mg/dl	94.2	79.9	109	7.15	14.30	
	mmol/l	2.64	2.25	3.03	0.20	0.39	Direct Clearance Method
	mg/dl	102	86.9	117	7.55	15.10	
Iron	µmol/l	37.4	30.6	44.2	3.40	6.80	Colorimetric without ppt.
	µg/dl	209	171	247	19.00	38.00	
LD (LDH)	U/l	728	619	837	54.50	109.00	P->L German methods 37°C
	U/l	526	447	605	39.50	79.00	P->L German methods 30°C
	U/l	369	314	424	27.50	55.00	P->L German methods 25°C

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	693	589	797	52.00	104.00	P->L SFBC 37°C
	U/l	500	425	575	37.50	75.00	P->L SFBC 30°C
	U/l	351	299	403	26.00	52.00	P->L SFBC 25°C
	U/l	353	300	406	26.50	53.00	L->P IFCC 37°C
	U/l	255	217	293	19.00	38.00	L->P IFCC 30°C
	U/l	179	152	206	13.50	27.00	L->P IFCC 25°C
Phosphate Inorganic	mmol/l	2.17	1.84	2.50	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.73	5.70	7.76	0.52	1.03	
Protein Total	g/l	46.9	37.6	56.2	4.65	9.30	Biuret reaction end point
	g/dl	4.69	3.76	5.62	0.47	0.93	
Triglycerides	mmol/l	2.80	2.36	3.24	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	248	209	287	19.50	39.00	
Urea	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.60	0.52	0.67	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	10.0	8.70	11.3	0.65	1.30	
	mmol/l	0.58	0.50	0.65	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.66	8.42	10.9	0.62	1.24	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.48	8.25	10.7	0.62	1.23	



## Ortho VITROS®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	27.4	23.3	31.5	2.05	4.10	Ortho Vitros Microslide Systems
	g/dl	2.74	2.33	3.15	0.21	0.41	
Alkaline Phosphatase	U/l	244	207	281	18.50	37.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	158	126	190	16.00	32.00	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	191	152	230	19.50	39.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	19.8	15.7	23.9	2.05	4.10	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	83.1	65.7	101	8.70	17.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.86	3.84	5.88	0.51	1.02	
	µmol/l	83.6	66.0	101	8.80	17.60	Vitros 250/500/700/950 Total BUBC
	mg/dl	4.89	3.86	5.92	0.52	1.03	
Bilirubin, Unconjugated Vitros BU	µmol/l	78.3	61.9	94.7	8.20	16.40	BuBc Vitros Slide
	mg/dl	4.58	3.62	5.54	0.48	0.96	
Calcium	mmol/l	3.06	2.75	3.37	0.16	0.31	Ortho Vitros Microslide Systems
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Chloride	mmol/l	118	108	128	5.00	10.00	Ortho Vitros Microslide Systems
	mg/dl	12.3	11.0	13.6	0.65	1.30	
Cholesterol	mmol/l	6.71	5.84	7.58	0.44	0.87	Ortho Vitros Microslide Systems
	mg/dl	259	225	293	17.00	34.00	
Cholinesterase	U/l	4858	3886	5830	486.00	972.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	410	336	484	37.00	74.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	381	305	457	38.00	76.00	Vitros IDMS Traceable
	mg/dl	4.31	3.45	5.17	0.43	0.86	

## Ortho VITROS®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	224	190	258	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.6	12.4	16.8	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	263	223	303	20.00	40.00	
HDL - Cholesterol	mmol/l	2.24	1.90	2.58	0.17	0.34	Vitros Magnetic HDL
	mg/dl	86.5	73.3	99.7	6.60	13.20	
	mmol/l	2.31	1.97	2.65	0.17	0.34	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	89.2	76.0	102	6.60	13.20	
Iron	µmol/l	41.4	33.9	48.9	3.75	7.50	Ortho Vitros Microslide Systems
	µg/dl	231	190	272	20.50	41.00	
Lactate	mmol/l	5.05	4.14	5.96	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	45.5	37.3	53.7	4.10	8.20	
LD (LDH)	U/l	1007	856	1158	75.50	151.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	745	598	892	73.50	147.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.20	1.87	2.53	0.17	0.33	Ortho Vitros Microslide Systems
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.21	5.72	6.70	0.25	0.49	Ortho Vitros Microslide Systems
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Ortho Vitros Microslide Systems
	g/dl	4.54	3.63	5.45	0.46	0.91	
Sodium	mmol/l	160	152	168	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.04	0.84	1.25	0.10	0.21	Vitros ECi
Total T3	nmol/l	6.80	5.10	8.50	0.85	1.70	Vitros ECi
	ng/ml	4.43	3.32	5.54	0.56	1.11	
	ng/dl	443	332	554	55.50	111.00	

**Ortho VITROS®****ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	3.13	2.63	3.63	0.25	0.50	Ortho Vitros Microslide Systems
	mg/dl	277	233	321	22.00	44.00	
Urea	mmol/l	18.1	15.4	20.8	1.35	2.70	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.1	15.4	20.8	1.35	2.70	BUN
	mg/dl	50.8	43.2	58.4	3.80	7.60	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Ortho Vitros Microslide Systems
	mg/dl	9.09	7.91	10.3	0.59	1.18	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.2	25.7	34.7	2.25	4.50	Bromocresol Green
	g/dl	3.02	2.57	3.47	0.23	0.45	
	g/l	26.2	22.3	30.1	1.95	3.90	Bromocresol Purple
	g/dl	2.62	2.23	3.01	0.20	0.39	
	g/l	26.3	22.3	30.3	2.00	4.00	Turbidimetric Assays
	g/dl	2.63	2.23	3.03	0.20	0.40	
Alkaline Phosphatase	U/l	274	233	315	20.50	41.00	Roche Integra AMP buffer 37°C
	U/l	213	182	244	15.50	31.00	Roche Integra AMP buffer 30°C
	U/l	175	149	201	13.00	26.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
	U/l	106	84	128	11.00	22.00	Tris buffer without P5P 30°C
	U/l	81	64	98	8.50	17.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	255	216	294	19.50	39.00	Roche EPS Liquid 37°C
Amylase Total	U/l	274	233	315	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	275	234	316	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
	U/l	99	80	118	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.5	13.8	21.2	1.85	3.70	Colorimetric
	mmol/l	17.2	13.7	20.7	1.75	3.50	Enzymatic

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	43.8	35.1	52.5	4.35	8.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	29.7	23.5	35.9	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	29.6	23.4	35.8	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.37	2.09	0.18	0.36	
	µmol/l	29.7	23.5	35.9	3.10	6.20	Roche JG factored
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Bilirubin Total	µmol/l	80.6	63.7	97.5	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.72	3.73	5.71	0.50	0.99	
	µmol/l	81.7	64.5	98.9	8.60	17.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.78	3.77	5.79	0.51	1.01	
	µmol/l	81.6	64.4	98.8	8.60	17.20	Diazonium ion
	mg/dl	4.77	3.77	5.77	0.50	1.00	
Calcium	mmol/l	3.06	2.76	3.36	0.15	0.30	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.07	2.77	3.37	0.15	0.30	NM-BAPTA
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.02	6.11	7.93	0.46	0.91	Cholesterol Oxidase
	mg/dl	271	236	306	17.50	35.00	
Cholinesterase	U/l	4941	3953	5929	494.00	988.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	477	391	563	43.00	86.00	CK-NAC substrate start (DGKC) 37°C
	U/l	299	245	353	27.00	54.00	CK-NAC substrate start (DGKC) 30°C
	U/l	203	166	240	18.50	37.00	CK-NAC substrate start (DGKC) 25°C
	U/l	464	380	548	42.00	84.00	CK-NAC (IFCC) 37°C
	U/l	290	238	342	26.00	52.00	CK-NAC (IFCC) 30°C
	U/l	197	162	232	17.50	35.00	CK-NAC (IFCC) 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	384	307	461	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	387	310	464	38.50	77.00	Enzymatic UV method
	mg/dl	4.37	3.50	5.24	0.44	0.87	
	µmol/l	391	313	469	39.00	78.00	Roche Creatinine Plus
	mg/dl	4.42	3.54	5.30	0.44	0.88	
	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	387	309	465	39.00	78.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.37	3.49	5.25	0.44	0.88	
	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	
D-3-Hydroxybutyrate	mmol/l	1.19	1.01	1.37	0.09	0.18	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	93.2	69.9	117	11.65	23.30	Roche Cobas 6000/8000
	ng/dl	7.27	5.45	9.09	0.91	1.82	
	pg/ml	72.7	54.5	90.9	9.10	18.20	Roche Cobas 6000/8000
gamma-GT	U/l	160	136	184	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	126	107	145	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	99	84	114	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	97	133	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	115	97	133	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	28	22	34	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose dehydrogenase
	mg/dl	281	238	324	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	
HDL - Cholesterol	mmol/l	15.6	13.2	18.0	1.20	2.40	Glucose oxidase
	mg/dl	281	238	324	21.50	43.00	
	mmol/l	3.09	2.63	3.55	0.23	0.46	Direct HDL PEGME
	mg/dl	119	102	136	8.50	17.00	
Iron	mmol/l	3.08	2.62	3.54	0.23	0.46	Direct HDL Roche 3rd generation
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	3.36	2.86	3.86	0.25	0.50	Direct HDL Roche 4th Generation
	mg/dl	130	110	150	10.00	20.00	
Iron	µmol/l	39.3	32.2	46.4	3.55	7.10	Colorimetric with ppt.
	µg/dl	220	180	260	20.00	40.00	
	µmol/l	39.3	32.2	46.4	3.55	7.10	Colorimetric without ppt.
	µg/dl	220	180	260	20.00	40.00	
Lactate	mmol/l	5.53	4.53	6.53	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	49.8	40.8	58.8	4.50	9.00	
LD (LDH)	U/l	677	575	779	51.00	102.00	P->L German methods 37°C
	U/l	489	415	563	37.00	74.00	P->L German methods 30°C
	U/l	343	292	394	25.50	51.00	P->L German methods 25°C
	U/l	684	581	787	51.50	103.00	P->L SFBC 37°C
	U/l	494	419	569	37.50	75.00	P->L SFBC 30°C
	U/l	347	295	399	26.00	52.00	P->L SFBC 25°C

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
	U/l	183	156	210	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	60	48	72	6.00	12.00	Roche 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	1.73	1.53	1.93	0.10	0.20	Xylidyl Blue
	mg/dl	4.20	3.72	4.68	0.24	0.48	
	mmol/l	1.73	1.53	1.93	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.20	3.72	4.68	0.24	0.48	
Osmolality	mOsm/kg	360	288	432	36.00	72.00	Calculated
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate enzymatic
	mg/dl	6.85	5.83	7.87	0.51	1.02	
	mmol/l	2.20	1.87	2.53	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.82	5.80	7.84	0.51	1.02	
Potassium	mmol/l	6.34	5.84	6.84	0.25	0.50	ISE method - indirect
Protein Total	g/l	43.9	35.1	52.7	4.40	8.80	Biuret reaction end point
	g/dl	4.39	3.51	5.27	0.44	0.88	
	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction kinetic
	g/dl	4.40	3.52	5.28	0.44	0.88	
PSA Total	ng/ml =	32.1	24.1	40.1	4.00	8.00	Roche Cobas 6000/8000
Sodium	mmol/l	165	157	173	4.00	8.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.23	0.98	1.48	0.12	0.25	Roche Cobas 6000/8000
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	



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	41.4	32.7	50.1	4.35	8.70	Calculated from Transferrin
	µg/dl	231	183	279	24.00	48.00	
Total T3	nmol/l	4.64	3.48	5.80	0.58	1.16	Roche Cobas 6000/8000
	ng/ml	3.02	2.27	3.77	0.38	0.75	
	ng/dl	302	227	377	37.50	75.00	Roche Cobas 6000/8000
Total T4	nmol/l	210	158	262	26.00	52.00	Roche Cobas 6000/8000
	µg/dl	16.4	12.3	20.5	2.05	4.10	
	ng/ml	164	123	205	20.50	41.00	Roche Cobas 6000/8000
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	2.80	2.35	3.25	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	248	208	288	20.00	40.00	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease end point
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.4	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	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.44	8.22	10.7	0.61	1.22	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.25	10.7	0.62	1.24	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.44	8.22	10.7	0.61	1.22	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.7	25.3	34.1	2.20	4.40	Bromocresol Green
	g/dl	2.97	2.53	3.41	0.22	0.44	
Alkaline Phosphatase	U/l	282	240	324	21.00	42.00	Roche Integra AMP buffer 37°C
	U/l	220	187	253	16.50	33.00	Roche Integra AMP buffer 30°C
	U/l	180	153	207	13.50	27.00	Roche Integra AMP buffer 25°C
	U/l	278	236	320	21.00	42.00	AMP optimised to IFCC 37°C
	U/l	217	184	250	16.50	33.00	AMP optimised to IFCC 30°C
	U/l	178	151	205	13.50	27.00	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	287	244	330	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
Bicarbonate	mmol/l	16.5	13.1	19.9	1.70	3.40	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	30.8	24.3	37.3	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.80	1.42	2.18	0.19	0.38	
	µmol/l	32.1	25.3	38.9	3.40	6.80	Roche JG factored
	mg/dl	1.88	1.48	2.28	0.20	0.40	

## Roche Cobas C111®

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	77.0	60.9	93.1	8.05	16.10	Diazo with Sulphanilic Acid
	mg/dl	4.50	3.56	5.44	0.47	0.94	
	µmol/l	79.9	63.1	96.7	8.40	16.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.67	3.69	5.65	0.49	0.98	
	µmol/l	79.3	62.7	95.9	8.30	16.60	Diazonium ion
	mg/dl	4.64	3.67	5.61	0.49	0.97	
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	3.11	2.80	3.42	0.16	0.31	NM-BAPTA
mg/dl	12.5	11.2	13.8	0.65	1.30		
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.10	6.18	8.02	0.46	0.92	Cholesterol Oxidase
	mg/dl	274	239	309	17.50	35.00	
CK Total	U/l	460	378	542	41.00	82.00	CK-NAC (IFCC) 37°C
	U/l	288	237	339	25.50	51.00	CK-NAC (IFCC) 30°C
	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	369	296	442	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.17	3.34	5.00	0.42	0.83	
	µmol/l	379	303	455	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.28	3.42	5.14	0.43	0.86	
	µmol/l	366	293	439	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.14	3.31	4.97	0.42	0.83	
	µmol/l	376	301	451	37.50	75.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.25	3.40	5.10	0.43	0.85	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	178	151	205	13.50	27.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	140	119	161	10.50	21.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	110	93	127	8.50	17.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	179	153	205	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	141	121	161	10.00	20.00	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	16.1	13.7	18.5	1.20	2.40	Hexokinase
	mg/dl	290	247	333	21.50	43.00	
HDL - Cholesterol	mmol/l	3.21	2.73	3.69	0.24	0.48	Direct HDL Roche 3rd generation
	mg/dl	124	105	143	9.50	19.00	
	mmol/l	3.48	2.96	4.00	0.26	0.52	Direct HDL Roche 4th Generation
	mg/dl	134	114	154	10.00	20.00	
LD (LDH)	U/l	378	321	435	28.50	57.00	L->P IFCC 37°C
	U/l	273	232	314	20.50	41.00	L->P IFCC 30°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 25°C
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	
Phosphate Inorganic	mmol/l	2.29	1.95	2.63	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.10	6.05	8.15	0.53	1.05	
Potassium	mmol/l	6.20	5.71	6.69	0.25	0.49	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	
Sodium	mmol/l	161	153	169	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	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	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	
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.63	8.37	10.9	0.63	1.26	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.61	8.35	10.9	0.63	1.26	
	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.78	8.52	11.0	0.63	1.26	

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	26.8	22.8	30.8	2.00	4.00	Bromocresol Purple
	g/dl	2.68	2.28	3.08	0.20	0.40	
Alkaline Phosphatase	U/l	269	229	309	20.00	40.00	Roche Integra AMP buffer 37°C
	U/l	210	178	242	16.00	32.00	Roche Integra AMP buffer 30°C
	U/l	172	146	198	13.00	26.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	142	113	171	14.50	29.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
Amylase Total	U/l	277	236	318	20.50	41.00	Roche liquid stable 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	17.0	13.5	20.5	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	28.9	22.8	35.0	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Roche JG factored
mg/dl	1.68	1.33	2.03	0.18	0.35		

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	81.4	64.3	98.5	8.55	17.10	Diazo with Sulphanilic Acid
	mg/dl	4.76	3.76	5.76	0.50	1.00	
	µmol/l	81.5	64.4	98.6	8.55	17.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.77	3.77	5.77	0.50	1.00	
	µmol/l	81.7	64.6	98.8	8.55	17.10	Diazonium ion
	mg/dl	4.78	3.78	5.78	0.50	1.00	
Calcium	mmol/l	3.08	2.77	3.39	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.3	11.1	13.5	0.60	1.20	
	mmol/l	3.09	2.78	3.40	0.16	0.31	NM-BAPTA
	mg/dl	12.4	11.1	13.7	0.65	1.30	
Chloride	mmol/l	114	105	123	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	
CK Total	U/l	469	384	554	42.50	85.00	CK-NAC (IFCC) 37°C
	U/l	294	240	348	27.00	54.00	CK-NAC (IFCC) 30°C
	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	388	310	466	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.38	3.50	5.26	0.44	0.88	
	µmol/l	393	314	472	39.50	79.00	Roche Creatinine Plus
	mg/dl	4.44	3.55	5.33	0.45	0.89	
	µmol/l	388	311	465	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.38	3.51	5.25	0.44	0.87	
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

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	190	161	219	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	150	127	173	11.50	23.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	117	99	135	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	16.2	13.7	18.7	1.25	2.50	Glucose oxidase
	mg/dl	292	247	337	22.50	45.00	
HDL - Cholesterol	mmol/l	3.08	2.62	3.54	0.23	0.46	Direct HDL Roche 3rd generation
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	3.27	2.78	3.76	0.25	0.49	Direct HDL Roche 4th Generation
	mg/dl	126	107	145	9.50	19.00	
Iron	µmol/l	39.2	32.1	46.3	3.55	7.10	Colorimetric without ppt.
	µg/dl	219	179	259	20.00	40.00	
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	672	571	773	50.50	101.00	P->L German methods 37°C
	U/l	485	412	558	36.50	73.00	P->L German methods 30°C
	U/l	341	289	393	26.00	52.00	P->L German methods 25°C
	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
	U/l	183	156	210	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	59	47	71	6.00	12.00	Roche Colorimetric 37°C
Magnesium	mmol/l	1.73	1.52	1.94	0.11	0.21	Xylidyl Blue
	mg/dl	4.20	3.69	4.71	0.26	0.51	
	mmol/l	1.75	1.54	1.96	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.25	3.74	4.76	0.26	0.51	



## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	6.36	5.85	6.87	0.26	0.51	ISE method - indirect
Protein Total	g/l	44.0	35.2	52.8	4.40	8.80	Biuret reaction end point
	g/dl	4.40	3.52	5.28	0.44	0.88	
Sodium	mmol/l	166	157	175	4.50	9.00	ISE method - indirect
TIBC	µmol/l	47.3	37.4	57.2	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	264	209	319	27.50	55.00	
Triglycerides	mmol/l	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	2.67	2.24	3.10	0.22	0.43	L/G Kinase EP. no correction
	mg/dl	236	198	274	19.00	38.00	
Urea	mmol/l	19.6	16.6	22.6	1.50	3.00	Urease kinetic
	mg/dl	118	99.8	136	9.10	18.20	
	mmol/l	19.6	16.7	22.5	1.45	2.90	BUN
	mg/dl	55.0	46.8	63.2	4.10	8.20	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.51	8.27	10.8	0.62	1.24	
	mmol/l	0.58	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.66	8.40	10.9	0.63	1.26	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.64	8.38	10.9	0.63	1.26	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.2	25.6	34.8	2.30	4.60	Bromocresol Green
	g/dl	3.02	2.56	3.48	0.23	0.46	
	g/l	26.3	22.3	30.3	2.00	4.00	Turbidimetric Assays
	g/dl	2.63	2.23	3.03	0.20	0.40	
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
ALT (GPT)	U/l	142	114	170	14.00	28.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	80	64	96	8.00	16.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	255	217	293	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	278	236	320	21.00	42.00	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
Bicarbonate	mmol/l	17.8	14.1	21.5	1.85	3.70	Enzymatic
Bile Acids	µmol/l	42.3	33.8	50.8	4.25	8.50	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	30.4	24.0	36.8	3.20	6.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.78	1.40	2.16	0.19	0.38	
	µmol/l	30.0	23.7	36.3	3.15	6.30	Roche JG factored
	mg/dl	1.76	1.39	2.13	0.19	0.37	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Bilirubin Total	µmol/l	79.0	62.4	95.6	8.30	16.60	Diazo with Sulphanilic Acid	
	mg/dl	4.62	3.65	5.59	0.49	0.97		
	µmol/l	80.5	63.6	97.4	8.45	16.90	Dichlorophenyl Diazonium (DPD)	
	mg/dl	4.71	3.72	5.70	0.50	0.99		
	µmol/l	80.8	63.8	97.8	8.50	17.00	Diazonium ion	
	mg/dl	4.73	3.73	5.73	0.50	1.00		
Calcium	mmol/l	3.05	2.75	3.35	0.15	0.30	Cresolphthalein complexone	
	mg/dl	12.2	11.0	13.4	0.60	1.20		
	mmol/l	3.05	2.75	3.35	0.15	0.30	NM-BAPTA	
	mg/dl	12.2	11.0	13.4	0.60	1.20		
	mmol/l	115	106	124	4.50	9.00		ISE indirect
	mg/dl	115	106	124	4.50	9.00		
Cholesterol	mmol/l	6.99	6.08	7.90	0.46	0.91	Cholesterol Oxidase	
	mg/dl	270	235	305	17.50	35.00		
Cholinesterase	U/l	4923	3938	5908	492.50	985.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	461	378	544	41.50	83.00	CK-NAC (IFCC) 37°C	
	U/l	289	237	341	26.00	52.00	CK-NAC (IFCC) 30°C	
	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 25°C	
Creatinine	µmol/l	393	315	471	39.00	78.00	Roche Creatinine Plus	
	mg/dl	4.44	3.56	5.32	0.44	0.88		
	µmol/l	391	312	470	39.50	79.00	Jaffe rate blanked	
	mg/dl	4.42	3.53	5.31	0.45	0.89		
	µmol/l	386	309	463	38.50	77.00	Jaffe rate blanked comp. (-26 µmol/l)	
	mg/dl	4.36	3.49	5.23	0.44	0.87		
gamma-GT	U/l	156	133	179	11.50	23.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	123	105	141	9.00	18.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	96	82	110	7.00	14.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	

## Roche Cobas c701 / c702 / c711

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	181	154	208	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	121	165	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	95	129	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.91	2.47	3.35	0.22	0.44	Direct HDL Roche 3rd generation
	mg/dl	112	95.3	129	8.35	16.70	
	mmol/l	3.29	2.80	3.78	0.25	0.49	Direct HDL Roche 4th Generation
	mg/dl	127	108	146	9.50	19.00	
Iron	µmol/l	38.7	31.7	45.7	3.50	7.00	Colorimetric without ppt.
	µg/dl	216	177	255	19.50	39.00	
Lactate	mmol/l	5.49	4.50	6.48	0.50	0.99	Colorimetric Lactate Oxidase
	mg/dl	49.5	40.5	58.5	4.50	9.00	
LD (LDH)	U/l	361	307	415	27.00	54.00	L->P IFCC 37°C
	U/l	261	222	300	19.50	39.00	L->P IFCC 30°C
	U/l	183	156	210	13.50	27.00	L->P IFCC 25°C
Lipase	U/l	63	50	76	6.50	13.00	Roche Colorimetric 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Spectrophotometric
	mg/dl	1.47	1.29	1.65	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	
Phosphate Inorganic	mmol/l	2.19	1.86	2.52	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.79	5.77	7.81	0.51	1.02	
Potassium	mmol/l	6.37	5.86	6.88	0.26	0.51	ISE method - indirect

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	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	
Sodium	mmol/l	166	158	174	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.8	37.8	57.8	5.00	10.00	FE+UIBC(saturation with iron)
	µg/dl	267	211	323	28.00	56.00	
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	244	205	283	19.50	39.00	
	mmol/l	2.77	2.32	3.22	0.23	0.45	L/G Kinase EP. no correction
	mg/dl	245	205	285	20.00	40.00	
Urea	mmol/l	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	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.41	8.18	10.6	0.62	1.23	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.48	8.23	10.7	0.63	1.25	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.41	8.18	10.6	0.62	1.23	

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	29.2	24.8	33.6	2.20	4.40	Bromocresol Green
	g/dl	2.92	2.48	3.36	0.22	0.44	
Alkaline Phosphatase	U/l	495	421	569	37.00	74.00	Diethanolamine buffer DEA 37°C
	U/l	321	273	369	24.00	48.00	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	292	248	336	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	312	265	359	23.50	47.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	152	122	182	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	19.1	15.1	23.1	2.00	4.00	Enzymatic
Bile Acids	µmol/l	43.3	34.6	52.0	4.35	8.70	5th Generation Colorimetric
Bilirubin Direct	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	30.5	24.1	36.9	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.78	1.41	2.15	0.19	0.37	
Bilirubin Total	µmol/l	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	97.9	77.3	119	10.30	20.60	Oxidation to Biliverdin/Vanadate
	mg/dl	5.73	4.52	6.94	0.61	1.21	
Calcium	mmol/l	3.08	2.77	3.39	0.16	0.31	Arsenazo III
	mg/dl	12.3	11.1	13.5	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE direct

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	7.58	6.60	8.56	0.49	0.98	Cholesterol Oxidase
	mg/dl	293	255	331	19.00	38.00	
CK Total	U/l	499	409	589	45.00	90.00	CK-NAC substrate start (DGKC) 37°C
	U/l	543	445	641	49.00	98.00	
Creatinine	µmol/l	332	266	398	33.00	66.00	Alkaline picrate no deproteinization
	mg/dl	3.75	3.01	4.49	0.37	0.74	
	µmol/l	379	303	455	38.00	76.00	Enzymatic UV method
	mg/dl	4.28	3.42	5.14	0.43	0.86	
D-3-Hydroxybutyrate	mmol/l	1.23	1.05	1.41	0.09	0.18	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	192	163	221	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.9	13.5	18.3	1.20	2.40	Hexokinase
	mg/dl	287	243	331	22.00	44.00	
	mmol/l	16.4	14.0	18.8	1.20	2.40	Glucose oxidase
	mg/dl	296	252	340	22.00	44.00	
Iron	µmol/l	38.3	31.4	45.2	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	176	252	19.00	38.00	
Lactate	mmol/l	5.32	4.36	6.28	0.48	0.96	Colorimetric Lactate Oxidase
	mg/dl	47.9	39.3	56.5	4.30	8.60	
LD (LDH)	U/l	723	615	831	54.00	108.00	P->L German methods 37°C
	U/l	357	303	411	27.00	54.00	
Lipase	U/l	92	74	110	9.00	18.00	Randox Colorimetric 37°C
Lithium	mmol/l	2.11	1.86	2.36	0.13	0.25	Colorimetric
	mg/dl	1.47	1.29	1.65	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	

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	
Potassium	mmol/l	6.40	5.89	6.91	0.26	0.51	Enzymatic
	mmol/l	6.12	5.63	6.61	0.25	0.49	ISE method - direct
Protein Total	g/l	45.0	36.0	54.0	4.50	9.00	Biuret reaction end point
	g/dl	4.50	3.60	5.40	0.45	0.90	
Sodium	mmol/l	162	154	170	4.00	8.00	Enzymatic
	mmol/l	161	153	169	4.00	8.00	ISE method - direct
TIBC	µmol/l	45.5	36.0	55.0	4.75	9.50	Direct Colorimetric
	µg/dl	254	201	307	26.50	53.00	
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	19.4	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	0.59	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	
	mmol/l	0.59	0.51	0.66	0.04	0.08	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.88	8.60	11.2	0.64	1.28	



## SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	28.2	23.9	32.5	2.15	4.30	Bromocresol Green
	g/dl	2.82	2.39	3.25	0.22	0.43	
	g/l	25.8	21.9	29.7	1.95	3.90	Bromocresol Purple
	g/dl	2.58	2.19	2.97	0.20	0.39	
Alkaline Phosphatase	U/l	282	240	324	21.00	42.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	160	128	192	16.00	32.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	258	220	296	19.00	38.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	294	250	338	22.00	44.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	158	127	189	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	19.2	15.2	23.2	2.00	4.00	Enzymatic
Bilirubin Direct	µmol/l	30.6	24.1	37.1	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.79	1.41	2.17	0.19	0.38	
Bilirubin Total	µmol/l	96.1	75.9	116	10.10	20.20	Oxidation to Biliverdin/Vanadate
	mg/dl	5.62	4.44	6.80	0.59	1.18	
Calcium	mmol/l	3.09	2.78	3.40	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.4	11.1	13.7	0.65	1.30	
	mmol/l	2.98	2.68	3.28	0.15	0.30	Arsenazo III
mg/dl	11.9	10.7	13.1	0.60	1.20		
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	7.19	6.26	8.12	0.47	0.93	Cholesterol Oxidase
	mg/dl	278	242	314	18.00	36.00	

## SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5565	4452	6678	556.50	1113.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	486	398	574	44.00	88.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	373	298	448	37.50	75.00	Enzymatic UV method
	mg/dl	4.21	3.37	5.05	0.42	0.84	
	µmol/l	373	299	447	37.00	74.00	Jaffe rate blanked
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	370	296	444	37.00	74.00	
mg/dl	4.18	3.34	5.02	0.42	0.84	Jaffe rate blanked comp. (-26 µmol/l)	
gamma-GT	U/l	184	156	212	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°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	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.42	2.06	2.78	0.18	0.36	Direct HDL Immunoseparation
	mg/dl	93.4	79.5	107	6.95	13.90	
	mmol/l	2.26	1.92	2.60	0.17	0.34	Direct Clearance Method
	mg/dl	87.2	74.1	100	6.55	13.10	
Iron	µmol/l	39.2	32.1	46.3	3.55	7.10	Colorimetric without ppt.
	µg/dl	219	179	259	20.00	40.00	
Lactate	mmol/l	5.44	4.46	6.42	0.49	0.98	Colorimetric Lactate Oxidase
	mg/dl	49.0	40.2	57.8	4.40	8.80	
LD (LDH)	U/l	711	604	818	53.50	107.00	P->L German methods 37°C
	U/l	358	305	411	26.50	53.00	L->P IFCC 37°C
Lipase	U/l	86	69	103	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	

## SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	1.74	1.54	1.94	0.10	0.20	Xylidyl Blue
	mg/dl	4.23	3.74	4.72	0.25	0.49	
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Potassium	mmol/l	6.33	5.83	6.83	0.25	0.50	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	
Sodium	mmol/l	165	157	173	4.00	8.00	ISE method - indirect
TIBC	μmol/l	41.6	32.8	50.4	4.40	8.80	FE+UIBC(saturation with iron)
	μg/dl	233	183	283	25.00	50.00	
	μmol/l	41.6	32.8	50.4	4.40	8.80	Direct Colorimetric
	μg/dl	233	183	283	25.00	50.00	
Triglycerides	mmol/l	2.83	2.38	3.28	0.23	0.45	Lipase/GPO-PAP no correction
	mg/dl	250	211	289	19.50	39.00	
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	Urease kinetic
	mg/dl	119	101	137	9.00	18.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.58	0.51	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.76	8.50	11.0	0.63	1.26	

## SIEMENS DIMENSION EXL®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	26.0	22.1	29.9	1.95	3.90	Bromocresol Purple
	g/dl	2.60	2.21	2.99	0.20	0.39	
Alkaline Phosphatase	U/l	295	251	339	22.00	44.00	Siemens Dimension AMP buffer 37°C
	U/l	290	246	334	22.00	44.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	156	125	187	15.50	31.00	Tris buffer with P5P 37°C
	U/l	157	126	188	15.50	31.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	355	302	408	26.50	53.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	179	143	215	18.00	36.00	Tris buffer with P5P 37°C
	U/l	177	142	212	17.50	35.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	18.5	14.7	22.3	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	87.1	68.8	105	9.15	18.30	Diazo with Sulphanilic Acid
	mg/dl	5.10	4.02	6.18	0.54	1.08	
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	
Chloride	mmol/l	118	109	127	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.66	5.80	7.52	0.43	0.86	Dimension-Siemens reagents
	mg/dl	257	224	290	16.50	33.00	
CK Total	U/l	460	377	543	41.50	83.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	389	311	467	39.00	78.00	Alkaline picrate no deproteinization
	mg/dl	4.40	3.51	5.29	0.45	0.89	

## SIEMENS DIMENSION EXL®

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	189	160	218	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	215	183	247	16.00	32.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.8	13.5	18.1	1.15	2.30	Hexokinase
	mg/dl	285	243	327	21.00	42.00	
HDL - Cholesterol	mmol/l	2.93	2.49	3.37	0.22	0.44	Direct HDL PEGME
	mg/dl	113	96.1	130	8.45	16.90	
Iron	µmol/l	37.8	31.0	44.6	3.40	6.80	Colorimetric without ppt.
	µg/dl	211	173	249	19.00	38.00	
Lactate	mmol/l	5.50	4.51	6.49	0.50	0.99	UV LDH
	mg/dl	49.6	40.6	58.6	4.50	9.00	
LD (LDH)	U/l	337	286	388	25.50	51.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	345	293	397	26.00	52.00	L->P IFCC 37°C
Lipase	U/l	268	215	321	26.50	53.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Methylthymol blue
	mg/dl	4.16	3.65	4.67	0.26	0.51	
Phosphate Inorganic	mmol/l	2.24	1.90	2.58	0.17	0.34	Phosphomolybdate UV
	mg/dl	6.94	5.89	7.99	0.53	1.05	
Potassium	mmol/l	6.28	5.78	6.78	0.25	0.50	ISE method - indirect
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Biuret reaction end point
	g/dl	4.51	3.61	5.41	0.45	0.90	
Sodium	mmol/l	164	156	172	4.00	8.00	ISE method - indirect
TIBC	µmol/l	40.5	32.0	49.0	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	226	179	273	23.50	47.00	
Triglycerides	mmol/l	2.74	2.30	3.18	0.22	0.44	Lipase/GPO-PAP no correction
	mg/dl	242	204	280	19.00	38.00	

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

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	2.76	2.32	3.20	0.22	0.44	L/G Kinase EP. no correction
	mg/dl	244	205	283	19.50	39.00	
Urea	mmol/l	19.7	16.8	22.6	1.45	2.90	Urease kinetic
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.63	8.37	10.9	0.63	1.26	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Spectrophotometric at 280-290
	mg/dl	9.63	8.37	10.9	0.63	1.26	

## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	26.5	22.5	30.5	2.00	4.00	Bromocresol Purple
	g/dl	2.65	2.25	3.05	0.20	0.40	
Alkaline Phosphatase	U/l	285	243	327	21.00	42.00	Siemens Dimension AMP buffer 37°C
	U/l	291	247	335	22.00	44.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	156	125	187	15.50	31.00	Tris buffer with P5P 37°C
	U/l	155	124	186	15.50	31.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	357	303	411	27.00	54.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	176	141	211	17.50	35.00	Tris buffer with P5P 37°C
	U/l	183	146	220	18.50	37.00	Siemens Dade Standard Non IFCC Correlated 37°C
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	87.5	69.1	106	9.20	18.40	Diazo with Sulphanilic Acid
	mg/dl	5.12	4.04	6.20	0.54	1.08	
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	
Chloride	mmol/l	117	108	126	4.50	9.00	ISE indirect
Cholesterol	mmol/l	6.74	5.87	7.61	0.44	0.87	Dimension-Siemens reagents
	mg/dl	260	227	293	16.50	33.00	
CK Total	U/l	469	384	554	42.50	85.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	382	305	459	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.32	3.45	5.19	0.44	0.87	

## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	382	306	458	38.00	76.00	Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	379	303	455	38.00	76.00	Jaffe rate blanked
	mg/dl	4.28	3.42	5.14	0.43	0.86	
gamma-GT	U/l	194	165	223	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	219	186	252	16.50	33.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.8	13.5	18.1	1.15	2.30	Hexokinase
	mg/dl	285	243	327	21.00	42.00	
HDL - Cholesterol	mmol/l	2.89	2.46	3.32	0.22	0.43	Direct HDL PPD
	mg/dl	112	95.0	129	8.50	17.00	
	mmol/l	3.01	2.56	3.46	0.23	0.45	Direct HDL PEGME
	mg/dl	116	98.8	133	8.60	17.20	
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	
LD (LDH)	U/l	360	306	414	27.00	54.00	L->P IFCC 37°C
Lipase	U/l	276	221	331	27.50	55.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Methylthymol blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
Phosphate Inorganic	mmol/l	2.25	1.91	2.59	0.17	0.34	Phosphomolybdate enzymatic
	mg/dl	6.98	5.92	8.04	0.53	1.06	
	mmol/l	2.21	1.88	2.54	0.17	0.33	Phosphomolybdate UV
	mg/dl	6.85	5.83	7.87	0.51	1.02	
Potassium	mmol/l	6.26	5.75	6.77	0.26	0.51	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	



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Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Sodium	mmol/l	162	153	171	4.50	9.00	ISE method - indirect
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	2.75	2.31	3.19	0.22	0.44	Lipase/Glycerol Dehydrogenase
	mg/dl	243	204	282	19.50	39.00	
Urea	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease end point
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.9	17.0	22.8	1.45	2.90	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	0.58	0.50	0.66	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.74	8.47	11.0	0.64	1.27	
	mmol/l	0.57	0.49	0.64	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.51	8.27	10.8	0.62	1.24	

## URIT 8000 Series

## ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1013UE Cat. No. HE1532/HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-04-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	30.7	26.1	35.3	2.30	4.60	Bromocresol Green
	g/dl	3.07	2.61	3.53	0.23	0.46	
Alkaline Phosphatase	U/l	298	254	342	22.00	44.00	AMP optimised to IFCC 37°C
	U/l	232	198	266	17.00	34.00	AMP optimised to IFCC 30°C
	U/l	190	162	218	14.00	28.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	137	110	164	13.50	27.00	Tris buffer without P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer without P5P 30°C
	U/l	77	62	92	7.50	15.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	140	112	168	14.00	28.00	Tris buffer without P5P 37°C
	U/l	95	76	114	9.50	19.00	Tris buffer without P5P 30°C
	U/l	67	53	81	7.00	14.00	Tris buffer without P5P 25°C
Calcium	mmol/l	3.11	2.80	3.42	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.2	13.8	0.65	1.30	
Cholesterol	mmol/l	7.33	6.38	8.28	0.48	0.95	Cholesterol Oxidase
	mg/dl	283	246	320	18.50	37.00	
Glucose	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
Protein Total	g/l	47.8	38.3	57.3	4.75	9.50	Biuret reaction end point
	g/dl	4.78	3.83	5.73	0.48	0.95	
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	



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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease kinetic
	mg/dl	115	97.4	133	8.80	17.60	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	
Uric Acid (Urate)	mmol/l	0.54	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	