HUMAN ASSAYED MULTI-SERA - LEVEL 2 (HUM ASY CONTROL 2)

CAT. NO. HN1530 **GTIN:** 05055273203783 **SIZE:** 20 x 5ml
CAT. NO. HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
LOT NO. 1292UN **EXPIRY:** 2022-03-28

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

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

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

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

Health and Safety Data Sheets are available on request.

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

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

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

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

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

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

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

MATERIALS PROVIDED
Human Assayed Multi-sera - Level 2 20 x 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

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

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

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

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

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

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

EC REP Randox Teoranta, Meenmore,
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Rev. 29 Oct '21 me

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】
HN1530(货号)： 20 × 5ml

【预期用途】
该类质控血清可用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度的评价。

【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2。

【主要组成成份】
试剂成分：人血清基质

【储存条件及有效期】
1. 试剂的稳定性
开封：冷冻贮存（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：冷冻贮存（2-8°C）。每个独立试剂瓶都可稳定保存到有效期。
2. **有效期**：四年

【适用仪器】
ABBOTT AEROSET®、Bayer ADVIA 1650®、Abbott Architect c8000/ci8200®、BAYER RA500/1000/2000/XT/OPERA®、Bayer/Ciba 550 Express®、COBAS INTEGRA®、 COBAS MIRA®、DADE DIMENSION®、HITACHI SERIES®、JOHNSON AND JOHNSON VITROS®、Konelab 20/30/60®、OLYMPUS AU400/500/600/800®、SYNCHRON CX4/5/7/9/LX20、VITALAB SELECTRA®等全自动生化分析仪。

【检验方法】
质控血清处于冻干状态。
1、在20°C至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°C至8°C可稳定3天。不能在15°C至25°C贮存。不可冷冻。
游离脂肪酸在2至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。

注意
® 注册商标
（1）应用于德国。根据德国联邦医生商会的指导方针确定范围。
（2）通过由德国联邦医生商会正式认可的参考实验室确定数值。
（3）DGKC：德国临床化学协会。
（4）IFCC：国际临床化学联合会。
（5）SCE：斯堪的纳维亚生化酶委员会。

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【医疗器械注册证书编号】
国械注进20162404592

【说明书批准及修改日期】
20161101

06 Dec 18 pl

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Purple
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	159	135	183	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	145	123	167	11.00	22.00	AMP optimised to NVKC/SFBC 37°C
	U/l	155	132	178	11.50	23.00	AMP non-optimised 37°C
ALT (GPT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	111	95	127	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.2	12.0	18.4	1.60	3.20	Enzymatic
Bile Acids	µmol/l	25.6	20.5	30.7	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.58	1.25	1.91	0.17	0.33	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	25.4	20.1	30.7	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	25.7	20.3	31.1	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.19	1.81	0.16	0.31	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Arsenazo III
	mg/dl	8.62	7.74	9.50	0.44	0.88	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.94	3.43	4.45	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	132	172	10.00	20.00	
Cholinesterase	U/l	6471	5177	7765	647.00	1294.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	191	156	226	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	12.4	9.91	14.9	1.25	2.49	Colorimetric
	µg/dl	78.9	63.0	94.8	7.95	15.90	
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	119	95.0	143	12.00	24.00	Enzymatic UV method
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	115	92.3	138	11.35	22.70	Creatinine PAP method
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.88	5.00	6.76	0.44	0.88	Hexokinase
	mg/dl	106	90.1	122	7.95	15.90	
	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose oxidase
	mg/dl	109	92.6	125	8.20	16.40	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL PPD
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.19	1.01	1.37	0.09	0.18	Direct Clearance Method
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	1.21	1.02	1.40	0.10	0.19	HDL - Ultra
	mg/dl	46.7	39.4	54.0	3.65	7.30	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric with ppt.
	µg/dl	101	82.7	119	9.15	18.30	
	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P 37°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.631	0.799	0.04	0.08	
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Arsenazo III
	mg/dl	2.08	1.83	2.33	0.13	0.25	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.84	0.74	0.94	0.05	0.10	Xylidyl Blue
	mg/dl	2.04	1.80	2.28	0.12	0.24	
	mmol/l	0.83	0.73	0.93	0.05	0.10	Enzymatic
	mg/dl	2.02	1.78	2.26	0.12	0.24	
Osmolality	mOsm/kg	302	242	362	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.27	1.08	1.46	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	3.94	3.35	4.53	0.30	0.59	
	mmol/l	1.28	1.09	1.47	0.10	0.19	Phosphomolybdate UV
	mg/dl	3.97	3.38	4.56	0.30	0.59	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction kinetic
	g/dl	5.70	4.56	6.84	0.57	1.14	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.2	33.4	51.0	4.40	8.80	FE+UIBC(saturation with iron)
	µg/dl	236	187	285	24.50	49.00	
	µmol/l	46.8	37.0	56.6	4.90	9.80	Calculated from Transferrin
	µg/dl	262	207	317	27.50	55.00	
Triglycerides	mmol/l	1.03	0.86	1.20	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.5	106	7.35	14.70	
	mmol/l	1.04	0.88	1.20	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	92.0	77.6	106	7.20	14.40	
	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	90.3	76.1	105	7.10	14.20	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
UIBC	µmol/l	23.9	19.6	28.2	2.15	4.30	Direct Colorimetric
	µg/dl	134	110	158	12.00	24.00	
Urea	mmol/l	7.44	6.32	8.56	0.56	1.12	Urease end point
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.49	6.37	8.61	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.49	6.37	8.61	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	

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ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.4	33.5	45.3	2.95	5.90	Bromocresol Green
	g/dl	3.94	3.35	4.53	0.30	0.59	
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
Glucose	mmol/l	5.85	4.97	6.73	0.44	0.88	Glucose oxidase
	mg/dl	105	89.6	120	7.70	15.40	
Magnesium	mmol/l	0.93	0.81	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.4	114	7.90	15.80	
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.4	49.4	3.25	6.50	

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Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	38.5	32.7	44.3	2.90	5.80	Bromocresol Green
	g/dl	3.85	3.27	4.43	0.29	0.58	
	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Purple
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	269	229	309	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	94	80	108	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	19.0	15.0	23.0	2.00	4.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	18.8	14.8	22.8	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.10	0.866	1.33	0.12	0.23	
Bilirubin Total	µmol/l	28.0	22.1	33.9	2.95	5.90	DPD (Beckman AU)
	mg/dl	1.64	1.29	1.99	0.18	0.35	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.00	3.48	4.52	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Cholinesterase	U/l	5175	4140	6210	517.50	1035.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	197	161	233	18.00	36.00	Beckman CK-NAC (Extinction Coeff) 37°C
Copper	µmol/l	16.6	13.3	19.9	1.65	3.30	Colorimetric
	µg/dl	106	84.6	127	10.70	21.40	
Creatinine	µmol/l	123	98.7	147	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	124	99.4	149	12.30	24.60	Enzymatic UV method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	121	96.5	146	12.25	24.50	Creatinine PAP method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	121	97.0	145	12.00	24.00	Jaffe rate blanked
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	µmol/l	115	91.8	138	11.60	23.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	120	95.7	144	12.15	24.30	IDMS traceable
	mg/dl	1.36	1.08	1.64	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	54	46	62	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	16	12	20	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.03	5.12	6.94	0.46	0.91	Glucose dehydrogenase
	mg/dl	109	92.3	126	8.35	16.70	
	mmol/l	6.07	5.16	6.98	0.46	0.91	Hexokinase
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	6.13	5.21	7.05	0.46	0.92	Glucose oxidase
	mg/dl	110	93.9	126	8.05	16.10	
HDL - Cholesterol	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct HDL Immunoseparation
	mg/dl	44.8	38.2	51.4	3.30	6.60	
	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct Clearance Method
	mg/dl	49.8	42.5	57.1	3.65	7.30	
	mmol/l	1.23	1.05	1.41	0.09	0.18	HDL - Ultra
	mg/dl	47.5	40.5	54.5	3.50	7.00	
Iron	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric with ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
Lactate	mmol/l	1.38	1.13	1.63	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.4	10.2	14.6	1.10	2.20	
LD (LDH)	U/l	193	164	222	14.50	29.00	L->P 37°C
	U/l	434	369	499	32.50	65.00	P->L Scandinavian & Dutch 37°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
	U/l	193	164	222	14.50	29.00	L to P Beckman (Extinction Coeff) 37°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	30	24	36	3.00	6.00	Other Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	40	32	48	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.631	0.799	0.04	0.08	
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Osmolality	mOsm/kg	304	244	364	30.00	60.00	Calculated
Phosphate Inorganic	mmol/l	1.30	1.10	1.50	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.03	3.41	4.65	0.31	0.62	
Potassium	mmol/l	3.98	3.67	4.29	0.16	0.31	ISE method - indirect
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction kinetic
	g/dl	5.82	4.65	6.99	0.59	1.17	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.8	36.9	56.7	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	262	206	318	28.00	56.00	
Triglycerides	mmol/l	1.09	0.91	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	80.8	112	7.85	15.70	
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
UIBC	µmol/l	28.6	23.5	33.7	2.55	5.10	Direct Colorimetric
	µg/dl	160	131	189	14.50	29.00	
Urea	mmol/l	7.66	6.51	8.81	0.58	1.15	Urease end point
	mg/dl	46.0	39.1	52.9	3.45	6.90	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.66	4.92	6.40	0.37	0.74	

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Beckman CX4/5/7/9/LX20®/DxC600/800®

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Purple
	g/dl	4.17	3.54	4.80	0.32	0.63	
Alkaline Phosphatase	U/l	164	140	188	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	167	142	192	12.50	25.00	AMP non-optimised 37°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	95	81	109	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	16.0	12.7	19.3	1.65	3.30	Differential rate pH change
Bilirubin Direct	µmol/l	12.2	9.68	14.7	1.26	2.52	Diazo with Sulphanilic Acid
	mg/dl	0.714	0.566	0.862	0.07	0.15	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Ion selective electrode
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.77	3.28	4.26	0.25	0.49	Cholesterol Oxidase
	mg/dl	146	127	165	9.50	19.00	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholinesterase	U/l	5755	4604	6906	575.50	1151.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	201	165	237	18.00	36.00	Monothioglycerol 37°C
Creatinine	µmol/l	119	95.3	143	11.85	23.70	Alkaline picrate no deproteinization
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	119	95.6	142	11.70	23.40	Jaffe rate blanked
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	121	96.4	146	12.30	24.60	IDMS traceable
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.85	4.98	6.72	0.44	0.87	Hexokinase
	mg/dl	105	89.7	120	7.65	15.30	
	mmol/l	5.81	4.94	6.68	0.44	0.87	Oxygen electrode
	mg/dl	105	89.0	121	8.00	16.00	
	mmol/l	5.80	4.93	6.67	0.44	0.87	Glucose oxidase
	mg/dl	105	88.8	121	8.10	16.20	
HDL - Cholesterol	mmol/l	1.23	1.05	1.41	0.09	0.18	Direct HDL PPD
	mg/dl	47.5	40.5	54.5	3.50	7.00	
Iron	µmol/l	16.6	13.6	19.6	1.50	3.00	Colorimetric without ppt.
	µg/dl	92.8	76.0	110	8.40	16.80	
LD (LDH)	U/l	166	141	191	12.50	25.00	L->P 37°C
Lipase	U/l	34	28	40	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Calmagite
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.12	3.50	4.74	0.31	0.62	

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Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction CX4/5/7
	g/dl	5.79	4.63	6.95	0.58	1.16	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction end point
	g/dl	5.80	4.64	6.96	0.58	1.16	
	g/l	55.1	44.1	66.1	5.50	11.00	Biuret reaction kinetic
	g/dl	5.51	4.41	6.61	0.55	1.10	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	83.7	116	8.15	16.30	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.7	117	8.15	16.30	
Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease end point
	mg/dl	45.7	38.8	52.6	3.45	6.90	
	mmol/l	7.80	6.63	8.97	0.59	1.17	Urease kinetic
	mg/dl	46.9	39.8	54.0	3.55	7.10	
	mmol/l	7.80	6.63	8.97	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.51	4.80	6.22	0.36	0.71	

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RANDOX

BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.5	33.5	45.5	3.00	6.00	Bromocresol Green
	g/dl	3.95	3.35	4.55	0.30	0.60	
Alkaline Phosphatase	U/l	165	140	190	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	129	109	149	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	105	89	121	8.00	16.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
Protein Total	g/l	55.6	44.5	66.7	5.55	11.10	Biuret reaction end point
	g/dl	5.56	4.45	6.67	0.56	1.11	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.08	6.02	8.14	0.53	1.06	Urease kinetic
	mg/dl	42.6	36.2	49.0	3.20	6.40	
	mmol/l	7.08	6.02	8.14	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Bromocresol Green
	g/dl	4.02	3.42	4.62	0.30	0.60	
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	29.9	23.6	36.2	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.75	1.38	2.12	0.19	0.37	
Cholesterol	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase
	mg/dl	152	133	171	9.50	19.00	
Glucose	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
LD (LDH)	U/l	449	382	516	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	324	276	372	24.00	48.00	P->L Scandinavian & Dutch 30°C
	U/l	228	194	262	17.00	34.00	P->L Scandinavian & Dutch 25°C
Protein Total	g/l	55.2	44.1	66.3	5.55	11.10	Biuret reaction end point
	g/dl	5.52	4.41	6.63	0.56	1.11	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
Urea	mmol/l	7.13	6.06	8.20	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.4	49.4	3.25	6.50	
	mmol/l	7.13	6.06	8.20	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	

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Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Bromocresol Green
	g/dl	3.95	3.36	4.54	0.30	0.59	
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.7	147	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	118	94.7	141	11.65	23.30	Creatinine PAP method
	mg/dl	1.33	1.07	1.59	0.13	0.26	
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Glucose oxidase
	mg/dl	109	92.4	126	8.30	16.60	

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	46.3	39.4	53.2	3.45	6.90	
Iron	µmol/l	16.8	13.8	19.8	1.50	3.00	Colorimetric without ppt.
	µg/dl	93.9	77.1	111	8.40	16.80	
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Protein Total	g/l	54.6	43.7	65.5	5.45	10.90	Biuret reaction end point
	g/dl	5.46	4.37	6.55	0.55	1.09	
Triglycerides	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	91.2	76.8	106	7.20	14.40	
Urea	mmol/l	7.57	6.43	8.71	0.57	1.14	Urease kinetic
	mg/dl	45.5	38.6	52.4	3.45	6.90	
	mmol/l	7.57	6.43	8.71	0.57	1.14	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.7	35.4	48.0	3.15	6.30	Bromocresol Green
	g/dl	4.17	3.54	4.80	0.32	0.63	
	g/l	38.8	32.9	44.7	2.95	5.90	Turbidimetric Assays
	g/dl	3.88	3.29	4.47	0.30	0.59	
Alkaline Phosphatase	U/l	146	125	167	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	114	97	131	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	93	80	106	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	72	62	82	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	92	79	105	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	93	79	107	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.9	12.6	19.2	1.65	3.30	Colorimetric
	mmol/l	15.2	12.0	18.4	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	17.2	13.6	20.8	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	17.4	13.7	21.1	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.801	1.24	0.11	0.22	

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Roche JG factored
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	24.5	19.3	29.7	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.3	19.2	29.4	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazonium ion
	mg/dl	1.44	1.13	1.75	0.16	0.31	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
	mmol/l	2.12	1.91	2.33	0.11	0.21	NM-BAPTA
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	98.0	90.1	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.87	3.37	4.37	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	
CK Total	U/l	185	152	218	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	116	95	137	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	120	96.2	144	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	121	96.7	145	12.15	24.30	Enzymatic UV method
	mg/dl	1.37	1.09	1.65	0.14	0.28	

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	121	96.9	145	12.05	24.10	Roche Creatinine Plus
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.3	149	12.35	24.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.08	5.17	6.99	0.46	0.91	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.19	1.01	1.37	0.09	0.18	Direct HDL PEGME
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	1.11	0.95	1.27	0.08	0.16	Direct HDL Roche 3rd generation
	mg/dl	42.8	36.5	49.1	3.15	6.30	
Iron	µmol/l	17.6	14.5	20.7	1.55	3.10	Colorimetric with ppt.
	µg/dl	98.4	81.1	116	8.65	17.30	
	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric without ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
Lactate	mmol/l	1.45	1.19	1.71	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.1	10.7	15.5	1.20	2.40	
LD (LDH)	U/l	399	339	459	30.00	60.00	P->L German methods 37°C
	U/l	288	245	331	21.50	43.00	P->L German methods 30°C
	U/l	202	172	232	15.00	30.00	P->L German methods 25°C

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	216	184	248	16.00	32.00	L->P IFCC 37°C
	U/l	156	133	179	11.50	23.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.02	0.90	1.15	0.06	0.13	Ion selective electrode
	mg/dl	0.708	0.621	0.795	0.04	0.09	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.92	2.46	0.14	0.27	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.19	3.57	4.81	0.31	0.62	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.22	3.60	4.84	0.31	0.62	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	54.5	43.6	65.4	5.45	10.90	Biuret reaction end point
	g/dl	5.45	4.36	6.54	0.55	1.09	
	g/l	54.6	43.7	65.5	5.45	10.90	Biuret reaction kinetic
	g/dl	5.46	4.37	6.55	0.55	1.09	
Sodium	mmol/l	146	138	154	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.2	34.1	52.3	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	241	191	291	25.00	50.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	82.9	115	8.10	16.20	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.2	115	7.95	15.90	

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	83.0	115	8.05	16.10	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease kinetic
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Acid Phosphatase (Total)	U/l	10.0	6.70	13.3	1.65	3.30	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	135	114	156	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	105	89	121	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	291	247	335	22.00	44.00	Randox AMP 37°C
	U/l	227	192	262	17.50	35.00	Randox AMP 30°C
	U/l	186	158	214	14.00	28.00	Randox AMP 25°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	74	102	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	99	84	114	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	17.0	13.5	20.5	1.75	3.50	Enzymatic
Bile Acids	µmol/l	22.5	18.0	27.0	2.25	4.50	5th Generation Colorimetric
Bilirubin Total	µmol/l	25.1	19.8	30.4	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Chloride	mmol/l	94.5	86.9	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.85	3.35	4.35	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	129	169	10.00	20.00	
CK Total	U/l	191	156	226	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.1	148	12.45	24.90	Roche Creatinine Plus
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.6	146	12.20	24.40	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	60	51	69	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	37	31	43	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	5.98	5.08	6.88	0.45	0.90	Hexokinase
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	5.84	4.96	6.72	0.44	0.88	Glucose oxidase
	mg/dl	105	89.4	121	7.80	15.60	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	28	22	34	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	mmol/l	1.29	1.10	1.48	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.00	3.41	4.59	0.30	0.59	
Potassium	mmol/l	4.05	3.73	4.37	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
Sodium	mmol/l	147	140	154	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.5	118	8.25	16.50	
Urea	mmol/l	7.78	6.61	8.95	0.59	1.17	Urease kinetic
	mg/dl	46.8	39.7	53.9	3.55	7.10	
	mmol/l	7.78	6.61	8.95	0.59	1.17	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.51	4.79	6.23	0.36	0.72	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	38.0	32.3	43.7	2.85	5.70	Bromocresol Green
	g/dl	3.80	3.23	4.37	0.29	0.57	
Alkaline Phosphatase	U/l	266	226	306	20.00	40.00	Diethanolamine buffer DEA 37°C
	U/l	207	176	238	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	170	144	196	13.00	26.00	Diethanolamine buffer DEA 25°C
	U/l	158	135	181	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	123	105	141	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	101	86	116	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	22.2	17.5	26.9	2.35	4.70	Nitrobenzenediazonium salt
	mg/dl	1.30	1.02	1.58	0.14	0.28	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Chloride	mmol/l	101	92.7	109	4.15	8.30	ISE direct
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Cholesterol Oxidase
	mg/dl	149	130	168	9.50	19.00	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	122	97.4	147	12.30	24.60	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Hexokinase
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.02	5.12	6.92	0.45	0.90	Glucose oxidase
	mg/dl	108	92.3	124	7.85	15.70	
HDL - Cholesterol	mmol/l	1.07	0.91	1.23	0.08	0.16	Direct HDL PEGME
	mg/dl	41.3	35.2	47.4	3.05	6.10	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
LD (LDH)	U/l	432	367	497	32.50	65.00	P->L SFBC 37°C
	U/l	312	265	359	23.50	47.00	P->L SFBC 30°C
	U/l	219	186	252	16.50	33.00	P->L SFBC 25°C
Magnesium	mmol/l	0.86	0.75	0.96	0.05	0.10	Xylidyl Blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.87	3.56	4.18	0.16	0.31	ISE method - direct
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.5	111	7.55	15.10	
Urea	mmol/l	7.28	6.19	8.37	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.2	50.4	3.30	6.60	
	mmol/l	7.28	6.19	8.37	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.81	5.06	6.56	0.38	0.75	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	

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RANDOX

MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin (electrophoresis)		67.2	60.5	73.9	3.35	6.70	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.8	4.4	7.2	0.70	1.39	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.6	5.0	8.2	0.79	1.58	% of total Protein (Beckman Capillary)
beta-globulin		9.5	7.2	11.8	1.14	2.28	% of total Protein (Beckman Capillary)
gamma-globulin		10.9	8.3	13.5	1.31	2.62	% of total Protein (Beckman Capillary)

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-HBDH	U/l	220	174	266	23.00	46.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	166	131	201	17.50	35.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	125	98	152	13.50	27.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	10.0	6.70	13.3	1.65	3.30	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
	g/l	40.9	34.7	47.1	3.10	6.20	Bromocresol Purple
	g/dl	4.09	3.47	4.71	0.31	0.62	
	g/l	38.3	32.6	44.0	2.85	5.70	Ortho Vitros Microslide Systems
	g/dl	3.83	3.26	4.40	0.29	0.57	
	g/l	38.7	32.9	44.5	2.90	5.80	Turbidimetric Assays
	g/dl	3.87	3.29	4.45	0.29	0.58	
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	Ortho Vitros Microslide Systems 37°C
	U/l	264	225	303	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	206	175	237	15.50	31.00	Diethanolamine buffer DEA 30°C
	U/l	169	144	194	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	167	142	192	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	130	111	149	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	107	91	123	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	160	136	184	12.00	24.00	AMP non-optimised 37°C
	U/l	125	106	144	9.50	19.00	AMP non-optimised 30°C
	U/l	102	87	117	7.50	15.00	AMP non-optimised 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer with P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer with P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer with P5P 25°C
	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	25	21	29	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	16	22	1.50	3.00	Tris buffer without P5P 25°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer SCE 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer SCE 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	93	79	107	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	74	63	85	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	98	83	113	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	90	76	104	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	102	86	118	8.00	16.00	Siemens - maltopenta/hexaoside 37°C
	U/l	90	77	103	6.50	13.00	Saccharogenic 37°C
	U/l	91	78	104	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	65	56	74	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	91	78	104	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	103	87	119	8.00	16.00	Siemens 2-chloro-pNPG3 37°C
	U/l	94	80	108	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	95	81	109	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	99	84	114	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	111	95	127	8.00	16.00	Abbott Architect IFCC Cal. 37°C
	U/l	88	75	101	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein B	g/l	0.60	0.49	0.71	0.05	0.11	Immunoturbidimetric
	mg/dl	60.2	49.4	71.0	5.40	10.80	
AST (GOT)	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	56	45	67	5.50	11.00	Tris buffer with P5P 37°C
	U/l	38	30	46	4.00	8.00	Tris buffer with P5P 30°C
	U/l	27	21	33	3.00	6.00	Tris buffer with P5P 25°C
	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
	U/l	38	30	46	4.00	8.00	Tris buffer SCE 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer SCE 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer SCE 25°C
Bicarbonate	mmol/l	16.1	12.7	19.5	1.70	3.40	Colorimetric
	mmol/l	18.1	14.4	21.8	1.85	3.70	Ortho Vitros Microslide Systems
	mmol/l	15.9	12.6	19.2	1.65	3.30	Differential rate pH change
	mmol/l	16.4	13.0	19.8	1.70	3.40	Enzymatic
	mmol/l	16.6	13.2	20.0	1.70	3.40	Ion selective electrode
Bile Acids	µmol/l	22.5	18.0	27.0	2.25	4.50	5th Generation Colorimetric
	µmol/l	24.9	19.9	29.9	2.50	5.00	4th Generation Colorimetric

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	17.8	14.0	21.6	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.04	0.819	1.26	0.11	0.22	
	µmol/l	21.0	16.6	25.4	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.971	1.49	0.13	0.26	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	16.4	13.0	19.8	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.959	0.761	1.16	0.10	0.20	
	µmol/l	16.5	13.0	20.0	1.75	3.50	Modified Jendrassik
	mg/dl	0.965	0.761	1.17	0.10	0.20	
Bilirubin Total	µmol/l	25.6	20.2	31.0	2.70	5.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.9	20.5	31.3	2.70	5.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	34.2	27.0	41.4	3.60	7.20	Diazo with Dichloroaniline (DCA)
	mg/dl	2.00	1.58	2.42	0.21	0.42	
	µmol/l	27.4	21.7	33.1	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.60	1.27	1.93	0.17	0.33	
	µmol/l	28.6	22.6	34.6	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	22.2	17.5	26.9	2.35	4.70	Nitrobenzenediazonium salt
	mg/dl	1.30	1.02	1.58	0.14	0.28	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.34	2.06	0.18	0.36	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	33.6	26.5	40.7	3.55	7.10	Modified Jendrassik
	mg/dl	1.97	1.55	2.39	0.21	0.42	
Calcium	mmol/l	2.12	1.90	2.34	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.50	7.62	9.38	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.08	1.87	2.29	0.11	0.21	Ion selective electrode
	mg/dl	8.34	7.49	9.19	0.43	0.85	
	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.14	1.92	2.36	0.11	0.22	NM-BAPTA
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	0.98	0.88	1.07	0.05	0.10	Ionised calcium
	mg/dl	3.91	3.52	4.30	0.20	0.39	
Chloride	mmol/l	101	92.9	109	4.05	8.10	Colorimetric
	mmol/l	97.9	90.1	106	3.90	7.80	Ortho Vitros Microslide Systems
	mmol/l	96.7	88.9	105	3.90	7.80	ISE indirect
	mmol/l	97.7	89.9	106	3.90	7.80	ISE direct
Cholesterol	mmol/l	3.78	3.29	4.27	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	146	127	165	9.50	19.00	
	mmol/l	3.92	3.41	4.43	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	132	170	9.50	19.00	
Cholinesterase	U/l	5487	4390	6584	548.50	1097.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	187	153	221	17.00	34.00	Ortho Vitros Microslide Systems 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC serum start (DGKC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	192	158	226	17.00	34.00	CK-NAC substrate start (DGKC) 37°C
	U/l	120	99	141	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	192	158	226	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	120	99	141	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
	U/l	200	164	236	18.00	36.00	Monothioglycerol 37°C
	U/l	125	103	147	11.00	22.00	Monothioglycerol 30°C
	U/l	85	70	100	7.50	15.00	Monothioglycerol 25°C
Copper	µmol/l	17.8	14.2	21.4	1.80	3.60	Atomic absorption
	µg/dl	113	90.3	136	11.35	22.70	
	µmol/l	16.8	13.4	20.2	1.70	3.40	Colorimetric
	µg/dl	107	85.2	129	10.90	21.80	
Cortisol	nmol/l	446	335	557	55.50	111.00	Roche Cobas E411
	µg/dl	16.1	12.1	20.1	2.00	4.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	121	96.8	145	12.10	24.20	Enzymatic UV method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	122	97.3	147	12.35	24.70	Creatinine PAP method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	124	99.4	149	12.30	24.60	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	120	96.3	144	11.85	23.70	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.36	1.09	1.63	0.14	0.27	
	µmol/l	115	92.4	138	11.30	22.60	Vitros IDMS Traceable
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	122	97.8	146	12.10	24.20	IDMS traceable
	mg/dl	1.38	1.11	1.65	0.14	0.27	
D-3-Hydroxybutyrate	mmol/l	0.27	0.23	0.31	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	1.74	1.39	2.09	0.18	0.35	Immunoturbidimetric
	ng/ml	1.36	1.09	1.63	0.14	0.27	
Folate	nmol/l	36.3	27.6	45.0	4.35	8.70	Roche Cobas E411
	ng/ml	16.0	12.2	19.8	1.90	3.80	
Free T4	pmol/l	15.5	11.7	19.3	1.90	3.80	Abbott Architect
	ng/dl	1.21	0.913	1.51	0.15	0.30	
	pg/ml	12.1	9.13	15.1	1.49	2.97	Abbott Architect
	pmol/l	17.5	13.1	21.9	2.20	4.40	Siemens Centaur XP/XPT/Classic
	ng/dl	1.37	1.02	1.72	0.18	0.35	
	pg/ml	13.7	10.2	17.2	1.75	3.50	Siemens Centaur XP/XPT/Classic
	pmol/l	16.9	12.7	21.1	2.10	4.20	Beckman Access
	ng/dl	1.32	0.991	1.65	0.16	0.33	
	pg/ml	13.2	9.91	16.5	1.65	3.29	Beckman Access

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	15.9	11.9	19.9	2.00	4.00	Beckman DxI800
	ng/dl	1.24	0.928	1.55	0.16	0.31	
	pg/ml	12.4	9.28	15.5	1.56	3.12	Beckman DxI800
	pmol/l	27.2	20.4	34.0	3.40	6.80	Vitros ECi
	ng/dl	2.12	1.59	2.65	0.27	0.53	
	pg/ml	21.2	15.9	26.5	2.65	5.30	Vitros ECi
	pmol/l	20.4	15.3	25.5	2.55	5.10	Roche Elecsys
	ng/dl	1.59	1.19	1.99	0.20	0.40	
	pg/ml	15.9	11.9	19.9	2.00	4.00	Roche Elecsys
	pmol/l	20.2	15.2	25.2	2.50	5.00	Roche Cobas E411
	ng/dl	1.58	1.19	1.97	0.20	0.39	
	pg/ml	15.8	11.9	19.7	1.95	3.90	Roche Cobas E411
	pmol/l	19.3	14.5	24.1	2.40	4.80	Roche Cobas 6000/8000
	ng/dl	1.51	1.13	1.89	0.19	0.38	
	pg/ml	15.1	11.3	18.9	1.90	3.80	Roche Cobas 6000/8000
	pmol/l	18.2	13.6	22.8	2.30	4.60	Biomerieux Vidas FT4N Kit
	ng/dl	1.42	1.06	1.78	0.18	0.36	
	pg/ml	14.2	10.6	17.8	1.80	3.60	Biomerieux Vidas FT4N Kit
Gentamicin	µmol/l	7.62	6.10	9.14	0.76	1.52	Immunoturbidimetric
	µg/ml	3.64	2.92	4.36	0.36	0.72	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	34	44	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	44	37	51	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	27	23	31	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	60	51	69	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	37	31	43	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.89	5.01	6.77	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	106	90.3	122	7.85	15.70	
	mmol/l	5.97	5.08	6.86	0.45	0.89	Glucose dehydrogenase
	mg/dl	108	91.5	125	8.25	16.50	
	mmol/l	6.00	5.10	6.90	0.45	0.90	Hexokinase
	mg/dl	108	91.9	124	8.05	16.10	
	mmol/l	5.73	4.87	6.59	0.43	0.86	Oxygen electrode
	mg/dl	103	87.8	118	7.60	15.20	
	mmol/l	6.08	5.17	6.99	0.46	0.91	Glucose oxidase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL PPD
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct HDL Immunoseparation
	mg/dl	44.8	38.1	51.5	3.35	6.70	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.16	0.98	1.34	0.09	0.18	Vitros Magnetic HDL
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	1.11	0.95	1.27	0.08	0.16	Direct HDL PEGME
	mg/dl	42.8	36.5	49.1	3.15	6.30	
	mmol/l	1.16	0.98	1.34	0.09	0.18	Direct Clearance Method
	mg/dl	44.8	37.9	51.7	3.45	6.90	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	45.2	38.3	52.1	3.45	6.90	
	mmol/l	1.15	0.98	1.32	0.09	0.17	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	1.14	0.97	1.31	0.09	0.17	Direct HDL Roche 3rd generation
	mg/dl	44.0	37.3	50.7	3.35	6.70	
	mmol/l	1.22	1.03	1.41	0.10	0.19	HDL - Ultra
	mg/dl	47.1	39.8	54.4	3.65	7.30	
Immunoglobulin A	g/l	1.78	1.34	2.22	0.22	0.44	Immunoturbidimetric
	mg/dl	178	134	222	22.00	44.00	
Immunoglobulin G	g/l	7.54	6.18	8.90	0.68	1.36	Immunoturbidimetric
	mg/dl	754	618	890	68.00	136.00	
Immunoglobulin M	g/l	0.81	0.65	0.97	0.08	0.16	Immunoturbidimetric
	mg/dl	81.0	64.8	97.2	8.10	16.20	
Iron	µmol/l	17.5	14.3	20.7	1.60	3.20	Colorimetric with ppt.
	µg/dl	97.8	79.9	116	8.95	17.90	
	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	
	µmol/l	17.2	14.1	20.3	1.55	3.10	Ortho Vitros Microslide Systems
	µg/dl	96.1	78.8	113	8.65	17.30	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.36	1.11	1.61	0.13	0.25	Ion selective electrode
	mg/dl	12.3	10.0	14.6	1.15	2.30	
	mmol/l	1.40	1.15	1.65	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.4	14.8	1.10	2.20	
	mmol/l	1.29	1.05	1.53	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	11.6	9.46	13.7	1.07	2.14	
	mmol/l	1.33	1.09	1.57	0.12	0.24	UV LDH
	mg/dl	12.0	9.82	14.2	1.09	2.18	
LAP	U/l	17	14	20	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	543	462	624	40.50	81.00	Ortho Vitros Microslide Systems 37°C
	U/l	180	153	207	13.50	27.00	L->P 37°C
	U/l	130	110	150	10.00	20.00	L->P 30°C
	U/l	91	78	104	6.50	13.00	L->P 25°C
	U/l	441	375	507	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	318	271	365	23.50	47.00	P->L Scandinavian & Dutch 30°C
	U/l	224	190	258	17.00	34.00	P->L Scandinavian & Dutch 25°C
	U/l	405	344	466	30.50	61.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	P->L German methods 25°C
	U/l	409	347	471	31.00	62.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
	U/l	148	126	170	11.00	22.00	L->P IFCC 30°C
	U/l	104	88	120	8.00	16.00	L->P IFCC 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
	U/l	192	154	230	19.00	38.00	Ortho Vitros Microslide Systems 37°C
	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
	U/l	39	32	46	3.50	7.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.27	1.12	1.42	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.882	0.778	0.986	0.05	0.10	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Ion selective electrode
	mg/dl	0.708	0.626	0.790	0.04	0.08	
	mmol/l	1.04	0.92	1.17	0.06	0.13	Spectrophotometric
	mg/dl	0.722	0.635	0.809	0.04	0.09	
	mmol/l	1.07	0.94	1.20	0.06	0.13	Randox Colorimetric
	mg/dl	0.743	0.654	0.832	0.04	0.09	
Magnesium	mmol/l	0.85	0.75	0.96	0.05	0.10	Arsenazo III
	mg/dl	2.07	1.82	2.32	0.13	0.25	
	mmol/l	0.87	0.76	0.97	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.11	1.86	2.36	0.13	0.25	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Calmagite
	mg/dl	2.09	1.84	2.34	0.13	0.25	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.86	0.76	0.96	0.05	0.10	Methylthymol blue
	mg/dl	2.08	1.83	2.33	0.13	0.25	
	mmol/l	0.89	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.90	2.40	0.13	0.25	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.83	0.73	0.93	0.05	0.10	Enzymatic
	mg/dl	2.02	1.78	2.26	0.12	0.24	
NEFA	mmol/l	1.01	0.86	1.16	0.08	0.15	Colorimetric
Osmolality	mOsm/kg	299	239	359	30.00	60.00	Calculated
	mOsm/kg	313	250	376	31.50	63.00	Freezing point depression
	mOsm/kg	311	249	373	31.00	62.00	Vapour pressure
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.8	9.38	14.2	1.21	2.42	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	4.25	3.63	4.87	0.31	0.62	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.12	3.50	4.74	0.31	0.62	
	mmol/l	1.31	1.12	1.50	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.06	3.47	4.65	0.30	0.59	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	Ortho Vitros Microslide Systems
	mmol/l	3.97	3.65	4.29	0.16	0.32	Enzymatic
	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - direct
	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Ortho Vitros Microslide Systems
	g/dl	5.70	4.56	6.84	0.57	1.14	
	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction end point
	g/dl	5.73	4.58	6.88	0.58	1.15	
	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction kinetic
	g/dl	5.63	4.50	6.76	0.57	1.13	
PSA Total	ng/ml =	12.8	9.58	16.0	1.61	3.22	Roche Elecsys Modular E170

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
PSA Total	ng/ml =	11.5	8.62	14.4	1.44	2.88	Beckman Access standardised to Hybritech
	ng/ml =	11.6	8.71	14.5	1.45	2.89	bioMerieux VIDAS TPSA
	ng/ml =	9.95	7.46	12.4	1.25	2.49	Abbott Architect
	ng/ml =	12.7	9.52	15.9	1.59	3.18	Cobas E411
	ng/ml =	12.0	8.98	15.0	1.51	3.02	Roche Cobas 6000/8000
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	145	138	152	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	148	141	155	3.50	7.00	Enzymatic
	mmol/l	144	137	151	3.50	7.00	ISE method - direct
	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.09	0.88	1.31	0.11	0.22	Abbott Architect
	µU/ml =	1.14	0.92	1.37	0.11	0.23	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.38	1.11	1.65	0.14	0.27	bioMerieux VIDAS TSH
	µU/ml =	1.24	0.99	1.49	0.13	0.25	Vitros ECi
	µU/ml =	1.43	1.14	1.72	0.15	0.29	Roche Elecsys
	µU/ml =	1.42	1.13	1.71	0.15	0.29	Roche Cobas E411
	µU/ml =	1.42	1.13	1.71	0.15	0.29	Roche Cobas 6000/8000
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Beckman DxI800 Hyper TSH
	µU/ml =	1.14	0.91	1.37	0.12	0.23	Siemens Centaur XP/XPT/Classic TSH3-Ultra
TIBC	µmol/l	48.0	37.9	58.1	5.05	10.10	Ortho Vitros Microslide Systems
	µg/dl	268	212	324	28.00	56.00	
	µmol/l	40.3	31.8	48.8	4.25	8.50	Removal of excess free iron
	µg/dl	225	178	272	23.50	47.00	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	43.3	34.2	52.4	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	242	191	293	25.50	51.00	
	µmol/l	47.5	37.5	57.5	5.00	10.00	Direct Colorimetric
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	47.5	37.5	57.5	5.00	10.00	Calculated from Transferrin
	µg/dl	266	210	322	28.00	56.00	
	µmol/l	49.9	39.4	60.4	5.25	10.50	Randox Colorimetric
	µg/dl	279	220	338	29.50	59.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	2.20	1.65	2.75	0.28	0.55	Abbott Architect
	ng/ml	1.43	1.07	1.79	0.18	0.36	
	ng/dl	143	107	179	18.00	36.00	Abbott Architect
	nmol/l	2.47	1.85	3.09	0.31	0.62	Siemens Centaur XP/XPT/Classic
	ng/ml	1.61	1.20	2.02	0.21	0.41	
	ng/dl	161	120	202	20.50	41.00	Siemens Centaur XP/XPT/Classic
	nmol/l	3.02	2.26	3.78	0.38	0.76	Vitros ECi
	ng/ml	1.97	1.47	2.47	0.25	0.50	
	ng/dl	197	147	247	25.00	50.00	Vitros ECi
	nmol/l	2.69	2.02	3.36	0.34	0.67	Roche Cobas E411
	ng/ml	1.75	1.32	2.18	0.22	0.43	
	ng/dl	175	132	218	21.50	43.00	Roche Cobas E411
	nmol/l	2.59	1.94	3.24	0.33	0.65	Roche Cobas 6000/8000
	ng/ml	1.69	1.26	2.12	0.22	0.43	
	ng/dl	169	126	212	21.50	43.00	Roche Cobas 6000/8000

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	85.4	64.1	107	10.65	21.30	Abbott Architect
	µg/dl	6.66	5.00	8.32	0.83	1.66	
	ng/ml	66.6	50.0	83.2	8.30	16.60	Abbott Architect
	nmol/l	79.1	59.3	98.9	9.90	19.80	Siemens Centaur XP/XPT/Classic
	µg/dl	6.17	4.63	7.71	0.77	1.54	
	ng/ml	61.7	46.3	77.1	7.70	15.40	Siemens Centaur XP/XPT/Classic
	nmol/l	77.6	58.2	97.0	9.70	19.40	Vitros ECi
	µg/dl	6.05	4.54	7.56	0.76	1.51	
	ng/ml	60.5	45.4	75.6	7.55	15.10	Vitros ECi
	nmol/l	84.1	63.1	105	10.50	21.00	Roche Cobas E411
	µg/dl	6.56	4.92	8.20	0.82	1.64	
	ng/ml	65.6	49.2	82.0	8.20	16.40	Roche Cobas E411
	nmol/l	83.3	62.5	104	10.40	20.80	Roche Cobas 6000/8000
	µg/dl	6.50	4.88	8.12	0.81	1.62	
	ng/ml	65.0	48.8	81.2	8.10	16.20	Roche Cobas 6000/8000
Transferrin	g/l	2.01	1.61	2.41	0.20	0.40	Immunoturbidimetric
	mg/dl	201	161	241	20.00	40.00	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	82.1	113	7.65	15.30	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	77.7	108	7.60	15.20	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.23	1.04	1.42	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	109	92.0	126	8.50	17.00	
UIBC	µmol/l	25.1	20.6	29.6	2.25	4.50	Direct Colorimetric
	µg/dl	140	115	165	12.50	25.00	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Ortho Vitros Microslide Systems
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease end point
	mg/dl	45.3	38.5	52.1	3.40	6.80	
	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.41	4.70	6.12	0.36	0.71	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.63	4.91	6.35	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Vitamin B12	pmol/l	405	324	486	40.50	81.00	Roche Cobas E411
	pg/ml	549	439	659	55.00	110.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Zinc	µmol/l	22.2	17.8	26.6	2.20	4.40	Colorimetric with deproteinisation
	µg/dl	145	116	174	14.50	29.00	

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RANDOX

MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.4	36.1	48.7	3.15	6.30	Bromocresol Green
	g/dl	4.24	3.61	4.87	0.32	0.63	
Alkaline Phosphatase	U/l	248	211	285	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	193	164	222	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	158	135	181	11.50	23.00	Diethanolamine buffer DEA 25°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	27	21	33	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	27	22	32	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Calcium	mmol/l	2.26	2.03	2.49	0.12	0.23	Arsenazo III
	mg/dl	9.06	8.14	9.98	0.46	0.92	
Cholesterol	mmol/l	3.98	3.47	4.49	0.26	0.51	Cholesterol Oxidase
	mg/dl	154	134	174	10.00	20.00	
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	99.6	150	12.70	25.40	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	118	94.3	142	11.85	23.70	Jaffe rate blanked
	mg/dl	1.33	1.07	1.59	0.13	0.26	
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.09	5.17	7.01	0.46	0.92	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose oxidase
	mg/dl	115	97.8	132	8.60	17.20	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL PPD
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct Clearance Method
	mg/dl	44.8	38.2	51.4	3.30	6.60	
Iron	µmol/l	17.1	14.0	20.2	1.55	3.10	Colorimetric without ppt.
	µg/dl	95.6	78.3	113	8.65	17.30	
LD (LDH)	U/l	421	358	484	31.50	63.00	P->L German methods 37°C
	U/l	304	258	350	23.00	46.00	P->L German methods 30°C
	U/l	213	182	244	15.50	31.00	P->L German methods 25°C
	U/l	409	348	470	30.50	61.00	P->L SFBC 37°C
	U/l	295	251	339	22.00	44.00	P->L SFBC 30°C
	U/l	207	176	238	15.50	31.00	P->L SFBC 25°C

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MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	212	181	243	15.50	31.00	L->P IFCC 37°C
	U/l	153	131	175	11.00	22.00	L->P IFCC 30°C
	U/l	107	92	122	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.94	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.02	2.56	0.14	0.27	
Phosphate Inorganic	mmol/l	1.42	1.20	1.64	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.40	3.72	5.08	0.34	0.68	
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction end point
	g/dl	5.91	4.73	7.09	0.59	1.18	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.90	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.61	6.47	8.75	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.63	4.91	6.35	0.36	0.72	

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	38.3	32.6	44.0	2.85	5.70	Ortho Vitros Microslide Systems
	g/dl	3.83	3.26	4.40	0.29	0.57	
Alkaline Phosphatase	U/l	136	116	156	10.00	20.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	65	56	74	4.50	9.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	53	42	64	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	18.1	14.4	21.8	1.85	3.70	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	10.4	8.22	12.6	1.09	2.18	BuBc Vitros Slide
	mg/dl	0.608	0.481	0.735	0.06	0.13	
Bilirubin Total	µmol/l	25.6	20.2	31.0	2.70	5.40	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	25.9	20.5	31.3	2.70	5.40	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.52	1.20	1.84	0.16	0.32	
Bilirubin, Unconjugated Vitros BU	µmol/l	11.8	9.32	14.3	1.24	2.48	BuBc Vitros Slide
	mg/dl	0.690	0.545	0.835	0.07	0.15	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	97.9	90.1	106	3.90	7.80	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.78	3.29	4.27	0.25	0.49	Ortho Vitros Microslide Systems
	mg/dl	146	127	165	9.50	19.00	
Cholinesterase	U/l	5328	4262	6394	533.00	1066.00	Ortho Vitros Microslide Systems 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	187	153	221	17.00	34.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	115	91.9	138	11.55	23.10	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	115	92.4	138	11.30	22.60	Vitros IDMS Traceable
	mg/dl	1.30	1.04	1.56	0.13	0.26	
Free T4	pmol/l	27.2	20.4	34.0	3.40	6.80	Vitros ECi
	ng/dl	2.12	1.59	2.65	0.27	0.53	
	pg/ml	21.2	15.9	26.5	2.65	5.30	Vitros ECi
gamma-GT	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.89	5.01	6.77	0.44	0.88	Ortho Vitros Microslide Systems
	mg/dl	106	90.3	122	7.85	15.70	
HDL - Cholesterol	mmol/l	1.16	0.98	1.34	0.09	0.18	Vitros Magnetic HDL
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	1.17	0.99	1.35	0.09	0.18	Vitros 5.1 FS microtip assay
	mg/dl	45.2	38.3	52.1	3.45	6.90	
	mmol/l	1.15	0.98	1.32	0.09	0.17	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	44.4	37.7	51.1	3.35	6.70	
Iron	µmol/l	17.2	14.1	20.3	1.55	3.10	Ortho Vitros Microslide Systems
	µg/dl	96.1	78.8	113	8.65	17.30	
Lactate	mmol/l	1.29	1.05	1.53	0.12	0.24	Ortho Vitros Microslide Systems
	mg/dl	11.6	9.46	13.7	1.07	2.14	
LD (LDH)	U/l	543	462	624	40.50	81.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	192	154	230	19.00	38.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.27	1.12	1.42	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.882	0.778	0.986	0.05	0.10	

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Ortho Vitros Microslide Systems
	mg/dl	2.11	1.86	2.36	0.13	0.25	
Phosphate Inorganic	mmol/l	1.37	1.17	1.57	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	4.25	3.63	4.87	0.31	0.62	
Potassium	mmol/l	4.05	3.72	4.38	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Ortho Vitros Microslide Systems
	g/dl	5.70	4.56	6.84	0.57	1.14	
Sodium	mmol/l	145	138	152	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.24	0.99	1.49	0.13	0.25	Vitros ECi
TIBC	µmol/l	48.0	37.9	58.1	5.05	10.10	Ortho Vitros Microslide Systems
	µg/dl	268	212	324	28.00	56.00	
Total T3	nmol/l	3.02	2.26	3.78	0.38	0.76	Vitros ECi
	ng/ml	1.97	1.47	2.47	0.25	0.50	
	ng/dl	197	147	247	25.00	50.00	Vitros ECi
Triglycerides	mmol/l	1.23	1.04	1.42	0.10	0.19	Ortho Vitros Microslide Systems
	mg/dl	109	92.0	126	8.50	17.00	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Ortho Vitros Microslide Systems
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.12	6.05	8.19	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.41	4.70	6.12	0.36	0.71	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	40.0	34.0	46.0	3.00	6.00	Bromocresol Purple
	g/dl	4.00	3.40	4.60	0.30	0.60	
	g/l	38.3	32.5	44.1	2.90	5.80	Turbidimetric Assays
	g/dl	3.83	3.25	4.41	0.29	0.58	
Alkaline Phosphatase	U/l	143	121	165	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	111	94	128	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	91	77	105	7.00	14.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.2	12.8	19.6	1.70	3.40	Colorimetric
	mmol/l	16.3	12.9	19.7	1.70	3.40	Enzymatic

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	24.1	19.3	28.9	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	17.3	13.7	20.9	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.01	0.801	1.22	0.10	0.21	
	µmol/l	17.3	13.7	20.9	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.801	1.22	0.10	0.21	
	µmol/l	17.3	13.7	20.9	1.80	3.60	Roche JG factored
	mg/dl	1.01	0.801	1.22	0.10	0.21	
	µmol/l	17.3	13.6	21.0	1.85	3.70	Diazo with Dichloroaniline (DCA)
	mg/dl	1.01	0.796	1.22	0.11	0.21	
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.14	1.92	2.36	0.11	0.22	NM-BAPTA
	mg/dl	8.58	7.70	9.46	0.44	0.88	
Chloride	mmol/l	93.7	86.2	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
Cholinesterase	U/l	5236	4189	6283	523.50	1047.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	115	95	135	10.00	20.00	CK-NAC substrate start (DGKC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC substrate start (DGKC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	187	153	221	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	19.3	14.5	24.1	2.40	4.80	Roche Cobas 6000/8000
	ng/dl	1.51	1.13	1.89	0.19	0.38	
	pg/ml	15.1	11.3	18.9	1.90	3.80	Roche Cobas 6000/8000
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	5.96	5.07	6.85	0.45	0.89	Glucose dehydrogenase
	mg/dl	107	91.4	123	7.80	15.60	
	mmol/l	5.99	5.09	6.89	0.45	0.90	Hexokinase
	mg/dl	108	91.7	124	8.15	16.30	
	mmol/l	5.93	5.04	6.82	0.45	0.89	Glucose oxidase
	mg/dl	107	90.8	123	8.10	16.20	
HDL - Cholesterol	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct HDL Roche 3rd generation
	mg/dl	44.8	38.1	51.5	3.35	6.70	
Iron	µmol/l	17.1	14.0	20.2	1.55	3.10	Colorimetric with ppt.
	µg/dl	95.6	78.3	113	8.65	17.30	
	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	
Lactate	mmol/l	1.39	1.14	1.64	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.5	10.3	14.7	1.10	2.20	
LD (LDH)	U/l	405	344	466	30.50	61.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	P->L German methods 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
	U/l	104	89	119	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.636	0.808	0.04	0.09	
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
	mmol/l	0.87	0.77	0.98	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.31	1.12	1.50	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.06	3.47	4.65	0.30	0.59	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.06	3.44	4.68	0.31	0.62	
Potassium	mmol/l	4.06	3.74	4.38	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.2	45.7	68.7	5.75	11.50	Biuret reaction end point
	g/dl	5.72	4.57	6.87	0.58	1.15	
	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction kinetic
	g/dl	5.73	4.58	6.88	0.58	1.15	
PSA Total	ng/ml =	12.0	8.96	15.0	1.52	3.04	Roche Cobas 6000/8000
Sodium	mmol/l	147	140	154	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.42	1.13	1.71	0.15	0.29	Roche Cobas 6000/8000
TIBC	µmol/l	42.0	33.2	50.8	4.40	8.80	FE+UIBC(saturation with iron)
	µg/dl	235	186	284	24.50	49.00	
	µmol/l	47.6	37.6	57.6	5.00	10.00	Calculated from Transferrin
	µg/dl	266	210	322	28.00	56.00	
Total T3	nmol/l	2.59	1.94	3.24	0.33	0.65	Roche Cobas 6000/8000
	ng/ml	1.69	1.26	2.12	0.22	0.43	
	ng/dl	169	126	212	21.50	43.00	Roche Cobas 6000/8000

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	83.3	62.5	104	10.40	20.80	Roche Cobas 6000/8000
	µg/dl	6.50	4.88	8.12	0.81	1.62	
	ng/ml	65.0	48.8	81.2	8.10	16.20	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.8	117	8.10	16.20	
UIBC	µmol/l	24.5	20.1	28.9	2.20	4.40	Direct Colorimetric
	µg/dl	137	112	162	12.50	25.00	
Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease end point
	mg/dl	45.7	38.8	52.6	3.45	6.90	
	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.48	4.75	6.21	0.37	0.73	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.82	6.24	0.36	0.71	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.1	35.0	47.2	3.05	6.10	Bromocresol Green
	g/dl	4.11	3.50	4.72	0.31	0.61	
Alkaline Phosphatase	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	111	95	127	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	91	78	104	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	146	125	167	10.50	21.00	AMP optimised to IFCC 37°C
	U/l	114	97	131	8.50	17.00	AMP optimised to IFCC 30°C
	U/l	93	80	106	6.50	13.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	91	78	104	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	16.9	13.4	20.4	1.75	3.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.989	0.784	1.19	0.10	0.21	
	µmol/l	16.9	13.3	20.5	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.989	0.778	1.20	0.11	0.21	
	µmol/l	17.3	13.6	21.0	1.85	3.70	Roche JG factored
	mg/dl	1.01	0.796	1.22	0.11	0.21	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	24.5	19.3	29.7	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.4	19.3	29.5	2.55	5.10	Diazonium ion
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	97.9	90.1	106	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	
CK Total	U/l	183	150	216	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	115	94	136	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	78	64	92	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	119	95.1	143	11.95	23.90	Alkaline picrate no deproteinization
	mg/dl	1.34	1.07	1.61	0.14	0.27	
	µmol/l	121	96.5	146	12.25	24.50	Roche Creatinine Plus
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	115	91.9	138	11.55	23.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.30	1.04	1.56	0.13	0.26	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	41	35	47	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	32	27	37	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
LD (LDH)	U/l	215	182	248	16.50	33.00	L->P IFCC 37°C
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C
	U/l	109	92	126	8.50	17.00	L->P IFCC 25°C
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction end point
	g/dl	5.76	4.61	6.91	0.58	1.15	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
Urea	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.54	4.82	6.26	0.36	0.72	

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Purple
	g/dl	4.09	3.48	4.70	0.31	0.61	
Alkaline Phosphatase	U/l	140	119	161	10.50	21.00	Roche Integra AMP buffer 37°C
	U/l	109	93	125	8.00	16.00	Roche Integra AMP buffer 30°C
	U/l	89	76	102	6.50	13.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.1	12.7	19.5	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	17.9	14.1	21.7	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.825	1.28	0.11	0.23	
	µmol/l	17.3	13.6	21.0	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	17.9	14.2	21.6	1.85	3.70	Roche JG factored
	mg/dl	1.05	0.831	1.27	0.11	0.22	

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Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	24.6	19.4	29.8	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.44	1.13	1.75	0.16	0.31	
	µmol/l	25.1	19.9	30.3	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Chloride	mmol/l	93.8	86.3	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	3.89	3.38	4.40	0.26	0.51	Cholesterol Oxidase
	mg/dl	150	130	170	10.00	20.00	
CK Total	U/l	191	157	225	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	81	67	95	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	135	108	162	13.50	27.00	Jaffe rate blanked
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	37	49	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	34	29	39	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose oxidase
	mg/dl	109	92.6	125	8.20	16.40	
HDL - Cholesterol	mmol/l	1.13	0.96	1.30	0.09	0.17	Direct HDL Roche 3rd generation
	mg/dl	43.6	37.1	50.1	3.25	6.50	
Iron	µmol/l	17.2	14.1	20.3	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.1	78.8	113	8.65	17.30	
Lactate	mmol/l	1.41	1.15	1.67	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.7	10.4	15.0	1.15	2.30	
LD (LDH)	U/l	396	337	455	29.50	59.00	P->L German methods 37°C
	U/l	286	243	329	21.50	43.00	P->L German methods 30°C
	U/l	201	171	231	15.00	30.00	P->L German methods 25°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.32	1.13	1.51	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.09	3.50	4.68	0.30	0.59	
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - indirect
Protein Total	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction end point
	g/dl	5.73	4.58	6.88	0.58	1.15	
Sodium	mmol/l	148	140	156	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.90	
	mmol/l	1.13	0.95	1.32	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	100	83.6	116	8.20	16.40	
UIBC	µmol/l	25.4	20.8	30.0	2.30	4.60	Direct Colorimetric
	µg/dl	142	116	168	13.00	26.00	
Urea	mmol/l	7.50	6.37	8.63	0.57	1.13	Urease kinetic
	mg/dl	45.1	38.3	51.9	3.40	6.80	
	mmol/l	7.50	6.38	8.62	0.56	1.12	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.56	4.84	6.28	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.0	47.4	3.10	6.20	Bromocresol Green
	g/dl	4.12	3.50	4.74	0.31	0.62	
Alkaline Phosphatase	U/l	134	114	154	10.00	20.00	Roche Integra AMP buffer 37°C
	U/l	104	89	119	7.50	15.00	Roche Integra AMP buffer 30°C
	U/l	86	73	99	6.50	13.00	Roche Integra AMP buffer 25°C
	U/l	129	110	148	9.50	19.00	AMP optimised to IFCC 37°C
	U/l	100	86	114	7.00	14.00	AMP optimised to IFCC 30°C
	U/l	82	70	94	6.00	12.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	89	75	103	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	17.5	13.8	21.2	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	µmol/l	17.2	13.6	20.8	1.80	3.60	Roche JG factored
	mg/dl	1.01	0.796	1.22	0.11	0.21	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	24.4	19.2	29.6	2.60	5.20	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.12	1.74	0.16	0.31	
	µmol/l	24.2	19.2	29.2	2.50	5.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Diazonium ion
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Calcium	mmol/l	2.11	1.90	2.32	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.13	1.91	2.35	0.11	0.22	Arsenazo III
	mg/dl	8.54	7.66	9.42	0.44	0.88	
	mmol/l	2.12	1.91	2.33	0.11	0.21	NM-BAPTA
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Chloride	mmol/l	94.5	86.9	102	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.83	3.33	4.33	0.25	0.50	Cholesterol Oxidase
	mg/dl	148	129	167	9.50	19.00	
Cholinesterase	U/l	5283	4226	6340	528.50	1057.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	190	156	224	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	119	98	140	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	36	31	41	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.95	5.06	6.84	0.45	0.89	Hexokinase
	mg/dl	107	91.2	123	7.90	15.80	
Iron	µmol/l	16.7	13.7	19.7	1.50	3.00	Colorimetric without ppt.
	µg/dl	93.4	76.6	110	8.40	16.80	
Lactate	mmol/l	1.40	1.14	1.66	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.6	10.3	14.9	1.15	2.30	
LD (LDH)	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	149	127	171	11.00	22.00	L->P IFCC 30°C
	U/l	105	89	121	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	30	24	36	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.06	0.13	Spectrophotometric
	mg/dl	0.736	0.649	0.823	0.04	0.09	
Magnesium	mmol/l	0.87	0.77	0.98	0.05	0.10	Xylidyl Blue
	mg/dl	2.12	1.87	2.37	0.13	0.25	
Phosphate Inorganic	mmol/l	1.29	1.09	1.49	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.00	3.38	4.62	0.31	0.62	
Potassium	mmol/l	4.08	3.75	4.41	0.17	0.33	ISE method - indirect

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
Sodium	mmol/l	148	140	156	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.4	34.3	52.5	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	243	192	294	25.50	51.00	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.1	115	8.00	16.00	
Urea	mmol/l	7.23	6.14	8.32	0.55	1.09	Urease kinetic
	mg/dl	43.5	36.9	50.1	3.30	6.60	
	mmol/l	7.23	6.15	8.31	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.51	4.79	6.23	0.36	0.72	
	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.48	4.77	6.19	0.36	0.71	
	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.48	4.75	6.21	0.37	0.73	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Green
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	289	246	332	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	36	28	44	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	81	69	93	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.5	14.7	22.3	1.90	3.80	Enzymatic
Bile Acids	µmol/l	22.5	18.0	27.0	2.25	4.50	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.1	14.3	21.9	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	16.0	12.6	19.4	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.936	0.737	1.14	0.10	0.20	
Bilirubin Total	µmol/l	30.4	24.0	36.8	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.40	2.16	0.19	0.38	
	µmol/l	27.8	22.0	33.6	2.90	5.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.63	1.29	1.97	0.17	0.34	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	
Chloride	mmol/l	94.0	86.5	102	3.75	7.50	ISE direct

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	138	178	10.00	20.00	
CK Total	U/l	214	175	253	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	121	97.2	145	11.90	23.80	Alkaline picrate no deproteinization
	mg/dl	1.37	1.10	1.64	0.14	0.27	
	µmol/l	119	95.2	143	11.90	23.80	Enzymatic UV method
	mg/dl	1.34	1.08	1.60	0.13	0.26	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.37	5.42	7.32	0.48	0.95	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.37	1.12	1.62	0.13	0.25	Colorimetric Lactate Oxidase
	mg/dl	12.3	10.1	14.5	1.10	2.20	
LD (LDH)	U/l	398	338	458	30.00	60.00	P->L German methods 37°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	39	31	47	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Colorimetric
	mg/dl	0.743	0.654	0.832	0.04	0.09	
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	Enzymatic
	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - direct
Protein Total	g/l	57.9	46.3	69.5	5.80	11.60	Biuret reaction end point
	g/dl	5.79	4.63	6.95	0.58	1.16	
Sodium	mmol/l	148	141	155	3.50	7.00	Enzymatic
	mmol/l	144	137	151	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.80	5.04	6.56	0.38	0.76	

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SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.0	33.2	44.8	2.90	5.80	Bromocresol Green
	g/dl	3.90	3.32	4.48	0.29	0.58	
	g/l	38.6	32.8	44.4	2.90	5.80	Bromocresol Purple
	g/dl	3.86	3.28	4.44	0.29	0.58	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	69	58	80	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	18.2	14.4	22.0	1.90	3.80	Enzymatic
Bilirubin Direct	µmol/l	16.3	12.9	19.7	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.954	0.755	1.15	0.10	0.20	
Bilirubin Total	µmol/l	28.9	22.8	35.0	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
	mmol/l	2.13	1.91	2.35	0.11	0.22	Arsenazo III
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Chloride	mmol/l	98.5	90.6	106	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.90	3.40	4.40	0.25	0.50	Cholesterol Oxidase
	mg/dl	151	131	171	10.00	20.00	

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SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28 **Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	5895	4716	7074	589.50	1179.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	123	98.1	148	12.45	24.90	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	115	92.4	138	11.30	22.60	Enzymatic UV method
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	123	98.2	148	12.40	24.80	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.80	4.93	6.67	0.44	0.87	Hexokinase
	mg/dl	105	88.8	121	8.10	16.20	
	mmol/l	5.94	5.05	6.83	0.45	0.89	Glucose oxidase
	mg/dl	107	91.0	123	8.00	16.00	
HDL - Cholesterol	mmol/l	1.06	0.90	1.22	0.08	0.16	Direct Clearance Method
	mg/dl	40.9	34.8	47.0	3.05	6.10	
Iron	µmol/l	17.2	14.1	20.3	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.1	78.8	113	8.65	17.30	
Lactate	mmol/l	1.24	1.01	1.47	0.12	0.23	Colorimetric Lactate Oxidase
	mg/dl	11.2	9.10	13.3	1.05	2.10	
LD (LDH)	U/l	404	343	465	30.50	61.00	P->L German methods 37°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	38	30	46	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Spectrophotometric
	mg/dl	0.743	0.654	0.832	0.04	0.09	

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RANDOX

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400 ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.88	0.77	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.88	2.40	0.13	0.26	
Phosphate Inorganic	mmol/l	1.32	1.13	1.51	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.09	3.50	4.68	0.30	0.59	
Potassium	mmol/l	4.07	3.75	4.39	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.2	45.7	68.7	5.75	11.50	Biuret reaction end point
	g/dl	5.72	4.57	6.87	0.58	1.15	
Sodium	mmol/l	147	140	154	3.50	7.00	ISE method - indirect
TIBC	µmol/l	48.3	38.1	58.5	5.10	10.20	FE+UIBC(saturation with iron)
	µg/dl	270	213	327	28.50	57.00	
	µmol/l	47.5	37.5	57.5	5.00	10.00	Direct Colorimetric
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.5	118	8.25	16.50	
Urea	mmol/l	7.74	6.58	8.90	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.74	6.58	8.90	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.9	33.9	45.9	3.00	6.00	Bromocresol Purple
	g/dl	3.99	3.39	4.59	0.30	0.60	
Alkaline Phosphatase	U/l	156	133	179	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer with P5P 37°C
	U/l	41	33	49	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	103	88	118	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	54	44	64	5.00	10.00	Tris buffer with P5P 37°C
	U/l	54	43	65	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.4	13.8	21.0	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	11.8	9.31	14.3	1.25	2.49	Diazo with Sulphanilic Acid
	mg/dl	0.690	0.545	0.835	0.07	0.15	
Bilirubin Total	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.61	1.28	1.94	0.17	0.33	
Calcium	mmol/l	2.04	1.84	2.24	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.18	7.37	8.99	0.41	0.81	
Chloride	mmol/l	99.1	91.2	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.50	3.05	3.95	0.23	0.45	Cholesterol Oxidase
	mg/dl	135	118	152	8.50	17.00	
	mmol/l	3.43	2.99	3.87	0.22	0.44	Dimension-Siemens reagents
	mg/dl	132	115	149	8.50	17.00	
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	133	106	160	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	57	49	65	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	67	57	77	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.10	5.19	7.01	0.46	0.91	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
HDL - Cholesterol	mmol/l	1.11	0.94	1.28	0.08	0.17	Direct HDL PEGME
	mg/dl	42.8	36.4	49.2	3.20	6.40	
Iron	µmol/l	16.3	13.4	19.2	1.45	2.90	Colorimetric without ppt.
	µg/dl	91.1	74.9	107	8.10	16.20	
Lactate	mmol/l	1.35	1.11	1.59	0.12	0.24	Colorimetric Lactate Oxidase
	mg/dl	12.2	10.0	14.4	1.10	2.20	
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	131	105	157	13.00	26.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.85	0.74	0.95	0.05	0.10	Methylthymol blue
	mg/dl	2.06	1.81	2.31	0.13	0.25	
Phosphate Inorganic	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	3.99	3.67	4.31	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Sodium	mmol/l	147	140	154	3.50	7.00	ISE method - indirect
TIBC	µmol/l	42.5	33.5	51.5	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	238	187	289	25.50	51.00	

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RANDOX

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.01	0.85	1.17	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	89.4	75.1	104	7.15	14.30	
	mmol/l	1.01	0.85	1.17	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	89.4	75.2	104	7.10	14.20	
	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	77.2	107	7.40	14.80	
Urea	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.64	4.92	6.36	0.36	0.72	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.1	34.1	46.1	3.00	6.00	Bromocresol Purple
	g/dl	4.01	3.41	4.61	0.30	0.60	
Alkaline Phosphatase	U/l	154	131	177	11.50	23.00	Siemens Dimension AMP buffer 37°C
	U/l	155	132	178	11.50	23.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	40	32	48	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	102	87	117	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	54	43	65	5.50	11.00	Tris buffer with P5P 37°C
	U/l	56	45	67	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	11.6	9.15	14.1	1.23	2.45	Diazo with Sulphanilic Acid
	mg/dl	0.679	0.535	0.823	0.07	0.14	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Calcium	mmol/l	2.06	1.85	2.27	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.26	7.41	9.11	0.43	0.85	
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.42	2.98	3.86	0.22	0.44	Dimension-Siemens reagents
	mg/dl	132	115	149	8.50	17.00	
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	104	154	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.18	1.74	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	68	58	78	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Hexokinase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.07	0.91	1.23	0.08	0.16	Direct HDL PPD
	mg/dl	41.3	35.0	47.6	3.15	6.30	
	mmol/l	1.14	0.97	1.31	0.09	0.17	Direct HDL PEGME
	mg/dl	44.0	37.4	50.6	3.30	6.60	
Iron	µmol/l	16.5	13.5	19.5	1.50	3.00	Colorimetric without ppt.
	µg/dl	92.2	75.5	109	8.35	16.70	
LD (LDH)	U/l	197	167	227	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	135	108	162	13.50	27.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.11	1.85	2.37	0.13	0.26	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.19	3.57	4.81	0.31	0.62	
	mmol/l	1.37	1.16	1.58	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.25	3.60	4.90	0.33	0.65	
Potassium	mmol/l	4.00	3.68	4.32	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.2	46.5	69.9	5.85	11.70	Biuret reaction end point
	g/dl	5.82	4.65	6.99	0.59	1.17	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.1	107	7.45	14.90	
	mmol/l	1.02	0.86	1.18	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	90.3	75.9	105	7.20	14.40	
Urea	mmol/l	7.56	6.42	8.70	0.57	1.14	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.56	6.43	8.69	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.32	0.28	0.36	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.41	4.70	6.12	0.36	0.71	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Spectrophotometric at 280-290
	mg/dl	5.61	4.89	6.33	0.36	0.72	

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RANDOX

URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	260	221	299	19.50	39.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
Creatinine	µmol/l	124	99.5	149	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
Glucose	mmol/l	6.28	5.34	7.22	0.47	0.94	Glucose oxidase
	mg/dl	113	96.2	130	8.40	16.80	
HDL - Cholesterol	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Protein Total	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction end point
	g/dl	5.84	4.67	7.01	0.59	1.17	
Triglycerides	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	80.1	111	7.75	15.50	
Urea	mmol/l	7.34	6.24	8.44	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.5	50.7	3.30	6.60	

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URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1292UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.34	6.24	8.44	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	

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