

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

<b>CAT. NO.</b> HNI530	<b>GTIN:</b> 05055273203783	<b>SIZE:</b> 20 x 5ml
<b>CAT. NO.</b> HS2611	<b>GTIN:</b> 05055273203813	<b>SIZE:</b> 5 x 5ml
<b>LOT NO.</b> 1376UN	<b>EXPIRY:</b> 2023-01-28	

### **INTENDED USE**

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

### **DEVICE DESCRIPTION**

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

### **SAFETY PRECAUTIONS AND WARNINGS**

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

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

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

Health and Safety Data Sheets are available on request.

### **STORAGE AND STABILITY**

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

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

### **LIMITATIONS**

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

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

Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.

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

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

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

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

The control should not be used as a calibration material.

### **PREPARATION FOR USE**

The Human Assayed Multi-sera is supplied lyophilised.

- Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.
- Refer to the Control section of the individual analyser application.
- Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

**MATERIALS PROVIDED**

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

**MATERIALS REQUIRED BUT NOT PROVIDED**

Volumetric pipette

**ASSIGNED VALUES**

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

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

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

**NOTES**

® All trademarks recognised.

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

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**Abbott Alinity/ Architect c/ci Systems®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**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	
	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Purple
	g/dl	4.38	3.72	5.04	0.33	0.66	
Alkaline Phosphatase	U/l	183	155	211	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	178	151	205	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	97	83	111	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	107	91	123	8.00	16.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.5	9.88	15.1	1.31	2.62	Enzymatic
Bile Acids	µmol/l	25.7	20.6	30.8	2.55	5.10	Enzymatic 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	18.5	14.6	22.4	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	26.8	21.2	32.4	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.54	1.22	1.86	0.16	0.32	

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazonium ion
	mg/dl	1.53	1.21	1.85	0.16	0.32	
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	
Chloride	mmol/l	102	94.1	110	3.95	7.90	ISE indirect
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Cholinesterase	U/l	6515	5212	7818	651.50	1303.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	196	161	231	17.50	35.00	CK-NAC (IFCC) 37°C
Copper	µmol/l	12.7	10.1	15.3	1.30	2.60	Colorimetric
	µg/dl	80.8	64.2	97.4	8.30	16.60	
Creatinine	µmol/l	138	110	166	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	µmol/l	137	110	164	13.50	27.00	Enzymatic UV method
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	137	110	164	13.50	27.00	Jaffe rate blanked
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	µmol/l	137	109	165	14.00	28.00	IDMS traceable
	mg/dl	1.55	1.23	1.87	0.16	0.32	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.95	5.05	6.85	0.45	0.90	Hexokinase
	mg/dl	107	91.0	123	8.00	16.00	
	mmol/l	5.91	5.02	6.80	0.45	0.89	Glucose oxidase
	mg/dl	106	90.5	122	7.75	15.50	

Abbott Alinity/ Architect c/ci Systems®		ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)					
Lot. No. 1376UN Cat. No. HN1530 / HS2611							
Size: 20 x 5 ml / 5 x 5 ml		Expiry: 2023-01-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PPD
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.32	1.13	1.51	0.10	0.19	Direct Clearance Method
	mg/dl	51.0	43.6	58.4	3.70	7.40	
	mmol/l	1.32	1.12	1.52	0.10	0.20	HDL - Ultra
	mg/dl	51.0	43.2	58.8	3.90	7.80	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric with ppt.
	µg/dl	108	88.9	127	9.55	19.10	
	µmol/l	19.2	15.7	22.7	1.75	3.50	Colorimetric without ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28
mg/dl		14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P 37°C
	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.639	0.805	0.04	0.08	
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Arsenazo III
	mg/dl	2.13	1.88	2.38	0.13	0.25	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Enzymatic
	mg/dl	2.13	1.88	2.38	0.13	0.25	
Osmolality	mOsm/kg	297	238	356	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.43	1.22	1.64	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.43	3.78	5.08	0.33	0.65	

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Lot. No. 1376UN Cat. No. HN1530 / HS2611

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.45	1.23	1.67	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.50	3.81	5.19	0.35	0.69	
Potassium	mmol/l	4.19	3.85	4.53	0.17	0.34	ISE method - indirect
Protein Total	g/l	59.4	47.5	71.3	5.95	11.90	Biuret reaction end point
	g/dl	5.94	4.75	7.13	0.60	1.19	
	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction kinetic
	g/dl	5.92	4.74	7.10	0.59	1.18	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	38.8	30.6	47.0	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	217	171	263	23.00	46.00	
	µmol/l	44.3	35.0	53.6	4.65	9.30	Calculated from Transferrin
	µg/dl	248	196	300	26.00	52.00	
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	83.5	115	7.80	15.60	
UIBC	µmol/l	19.6	16.1	23.1	1.75	3.50	Direct Colorimetric
	µg/dl	110	90.0	130	10.00	20.00	
Urea	mmol/l	7.12	6.05	8.19	0.54	1.07	Urease end point
	mg/dl	42.8	36.4	49.2	3.20	6.40	
	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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Lot. No. 1376UN Cat. No. HN1530 / HS2611

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

## Beckman Coulter AU Series®

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	203	160	246	21.50	43.00	Oxobutyrate < 10 mmol/l 37°C
Albumin	g/l	40.8	34.6	47.0	3.10	6.20	Bromocresol Green
	g/dl	4.08	3.46	4.70	0.31	0.62	
	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Purple
	g/dl	4.43	3.77	5.09	0.33	0.66	
Alkaline Phosphatase	U/l	286	243	329	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	214	182	246	16.00	32.00	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	37	29	45	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	pNP Maltotrioxide substrates 37°C
	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	37	30	44	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	18.4	14.5	22.3	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.08	0.848	1.31	0.12	0.23	
Bilirubin Total	µmol/l	28.8	22.7	34.9	3.05	6.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.7	22.7	34.7	3.00	6.00	DPD (Beckman AU)
	mg/dl	1.68	1.33	2.03	0.18	0.35	



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Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Cresolphthalein complexone
	mg/dl	9.02	8.10	9.94	0.46	0.92	
	mmol/l	2.26	2.04	2.48	0.11	0.22	Arsenazo III
	mg/dl	9.06	8.18	9.94	0.44	0.88	
Chloride	mmol/l	100	92.3	108	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase
	mg/dl	157	137	177	10.00	20.00	
Cholinesterase	U/l	5442	4354	6530	544.00	1088.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	219	180	258	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	207	169	245	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	201	165	237	18.00	36.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	141	112	170	14.50	29.00	Enzymatic UV method
	mg/dl	1.59	1.27	1.91	0.16	0.32	
	µmol/l	141	113	169	14.00	28.00	Creatinine PAP method
	mg/dl	1.59	1.28	1.90	0.16	0.31	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
µmol/l	134	107	161	13.50	27.00	IDMS traceable	
mg/dl	1.51	1.21	1.81	0.15	0.30		
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	43	36	50	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	50	42	58	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	20	16	24	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose dehydrogenase
	mg/dl	112	94.8	129	8.60	17.20	
	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	1.27	1.08	1.46	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	mmol/l	1.32	1.12	1.52	0.10	0.20	HDL - Ultra
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric with ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	µmol/l	19.6	16.0	23.2	1.80	3.60	Colorimetric without ppt.
	µg/dl	110	89.4	131	10.30	20.60	
	mmol/l	1.49	1.23	1.75	0.13	0.26	Colorimetric Lactate Oxidase
LD (LDH)	mg/dl	13.4	11.1	15.7	1.15	2.30	
	U/l	192	164	220	14.00	28.00	L->P 37°C
LD (LDH)	U/l	409	347	471	31.00	62.00	P->L Scandinavian & Dutch 37°C
	U/l	196	166	226	15.00	30.00	L->P IFCC 37°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	186	158	214	14.00	28.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	31	24	38	3.50	7.00	Other Colorimetric 37°C
	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.01	0.89	1.14	0.06	0.13	Spectrophotometric
	mg/dl	0.701	0.615	0.787	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.56	3.88	5.24	0.34	0.68	
	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	
Potassium	mmol/l	4.16	3.83	4.49	0.17	0.33	ISE method - indirect
Protein Total	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction end point
	g/dl	5.90	4.72	7.08	0.59	1.18	
	g/l	59.0	47.2	70.8	5.90	11.80	Biuret reaction kinetic
	g/dl	5.90	4.72	7.08	0.59	1.18	
Sodium	mmol/l	143	135	151	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	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.3	116	7.85	15.70	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.3	116	7.85	15.70	

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
UIBC	µmol/l	23.4	19.2	27.6	2.10	4.20	Direct Colorimetric
	µg/dl	131	107	155	12.00	24.00	
Urea	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease end point
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.41	6.29	8.53	0.56	1.12	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.41	6.30	8.52	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.95	5.17	6.73	0.39	0.78	

## Beckman CX4/5/7/9/LX20®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Green
	g/dl	4.43	3.77	5.09	0.33	0.66	
	g/l	44.7	38.0	51.4	3.35	6.70	Bromocresol Purple
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	193	164	222	14.50	29.00	p-Nitrophenylphosphate AMP 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	12.5	9.91	15.1	1.30	2.59	Differential rate pH change
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	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Ion selective electrode
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Chloride	mmol/l	101	92.9	109	4.05	8.10	ISE indirect
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
CK Total	U/l	217	178	256	19.50	39.00	Monothioglycerol 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	135	108	162	13.50	27.00	IDMS traceable
	mg/dl	1.53	1.22	1.84	0.16	0.31	

## Beckman CX4/5/7/9/LX20®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	42	36	48	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.93	5.04	6.82	0.45	0.89	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	5.92	5.03	6.81	0.45	0.89	Glucose oxidase
	mg/dl	107	90.6	123	8.20	16.40	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.52	1.24	1.80	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.7	11.2	16.2	1.25	2.50	
LD (LDH)	U/l	162	137	187	12.50	25.00	L->P 37°C
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Calmagite
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	4.10	3.78	4.42	0.16	0.32	ISE method - indirect
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction end point
	g/dl	6.01	4.81	7.21	0.60	1.20	
	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction kinetic
	g/dl	5.77	4.62	6.92	0.58	1.15	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	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	
Urea	mmol/l	7.73	6.57	8.89	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	

**Beckman CX4/5/7/9/LX20®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.73	6.57	8.89	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	

## Beckman DxC600/800®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.3	37.7	50.9	3.30	6.60	Bromocresol Green
	g/dl	4.43	3.77	5.09	0.33	0.66	
	g/l	44.9	38.1	51.7	3.40	6.80	Bromocresol Purple
	g/dl	4.49	3.81	5.17	0.34	0.68	
Alkaline Phosphatase	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	192	163	221	14.50	29.00	AMP non-optimised 37°C
ALT (GPT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer SCE 37°C
Bicarbonate	mmol/l	12.7	10.1	15.3	1.30	2.60	Differential rate pH change
	mmol/l	13.5	10.7	16.3	1.40	2.80	Ion selective electrode
Bilirubin Total	µmol/l	29.8	23.5	36.1	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Ion selective electrode
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	101	92.9	109	4.05	8.10	ISE indirect
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	214	176	252	19.00	38.00	Monothioglycerol 37°C



## Beckman DxC600/800®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
CK Total	U/l	208	171	245	18.50	37.00	Creatinine phosphate substrate Start 37°C	
Creatinine	μmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization	
	mg/dl	1.54	1.23	1.85	0.16	0.31		
	μmol/l	136	108	164	14.00	28.00	Jaffe rate blanked	
	mg/dl	1.54	1.22	1.86	0.16	0.32		
IDMS traceable	μmol/l	136	109	163	13.50	27.00		
	mg/dl	1.54	1.23	1.85	0.16	0.31		
gamma-GT	U/l	41	35	47	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C	
Glucose	mmol/l	5.94	5.05	6.83	0.45	0.89	Hexokinase	
	mg/dl	107	91.0	123	8.00	16.00		
	mmol/l	5.97	5.07	6.87	0.45	0.90	Oxygen electrode	
	mg/dl	108	91.4	125	8.30	16.60		
	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	1.34	1.14	1.54	0.10	0.20	Direct HDL PPD	
	mg/dl	51.7	44.0	59.4	3.85	7.70		
	mmol/l	1.36	1.16	1.56	0.10	0.20	HDL - Ultra	
	mg/dl	52.5	44.8	60.2	3.85	7.70		
	μmol/l	19.2	15.8	22.6	1.70	3.40		Colorimetric without ppt.
	μg/dl	107	88.3	126	9.35	18.70		
Lactate	mmol/l	1.50	1.23	1.77	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.5	11.1	15.9	1.20	2.40		
LD (LDH)	U/l	162	138	186	12.00	24.00	L->P 37°C	
	U/l	518	440	596	39.00	78.00	Pyruvate 1.4 mM - Beckman LD-P 37°C	
	U/l	161	137	185	12.00	24.00	L->P IFCC 37°C	

## Beckman DxC600/800®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	33	26	40	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Calmagite
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.43	1.21	1.65	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.43	3.75	5.11	0.34	0.68	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	4.11	3.78	4.44	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.1	48.0	72.2	6.05	12.10	Biuret reaction end point
	g/dl	6.01	4.80	7.22	0.61	1.21	
	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction kinetic
	g/dl	5.80	4.64	6.96	0.58	1.16	
Sodium	mmol/l	141	134	148	3.50	7.00	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	83.5	115	7.80	15.60	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	84.0	116	8.00	16.00	
Urea	mmol/l	7.56	6.42	8.70	0.57	1.14	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.73	6.57	8.89	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.73	6.57	8.89	0.58	1.16	
mg/dl	21.7	18.4	25.0	1.65	3.30		
Uric Acid (Urate)	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	

## BIOSYSTEMS A15

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.1	34.9	47.3	3.10	6.20	Bromocresol Green
	g/dl	4.11	3.49	4.73	0.31	0.62	
Alkaline Phosphatase	U/l	185	157	213	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	144	122	166	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	118	100	136	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	41	33	49	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	19	27	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
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Glucose	mmol/l	6.12	5.21	7.03	0.46	0.91	Glucose oxidase
	mg/dl	110	93.9	126	8.05	16.10	
Protein Total	g/l	58.3	46.7	69.9	5.80	11.60	Biuret reaction end point
	g/dl	5.83	4.67	6.99	0.58	1.16	
Triglycerides	mmol/l	1.12	0.95	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.6	115	7.75	15.50	
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.1	48.7	3.15	6.30	

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Urea	mmol/l	7.06	6.00	8.12	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.33	0.28	0.37	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.48	4.77	6.19	0.36	0.71	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.12	6.68	0.39	0.78	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.2	35.1	47.3	3.05	6.10	Bromocresol Green
	g/dl	4.12	3.51	4.73	0.31	0.61	
Alkaline Phosphatase	U/l	289	245	333	22.00	44.00	Diethanolamine buffer DEA 37°C
	U/l	225	191	259	17.00	34.00	Diethanolamine buffer DEA 30°C
	U/l	185	157	213	14.00	28.00	Diethanolamine buffer DEA 25°C
	U/l	175	149	201	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	136	116	156	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	112	95	129	8.50	17.00	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	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
Bilirubin Total	µmol/l	24.7	19.5	29.9	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.44	1.14	1.74	0.15	0.30	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Arsenazo III
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	4.10	3.56	4.64	0.27	0.54	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Creatinine	µmol/l	137	110	164	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.55	1.24	1.86	0.16	0.31	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	133	106	160	13.50	27.00	Creatinine PAP method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	142	113	171	14.50	29.00	Jaffe rate blanked
	mg/dl	1.60	1.28	1.92	0.16	0.32	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	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
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Glucose oxidase
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.21	1.02	1.40	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	46.7	39.4	54.0	3.65	7.30	
Phosphate Inorganic	mmol/l	1.56	1.32	1.80	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.84	4.09	5.59	0.38	0.75	
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction end point
	g/dl	6.11	4.89	7.33	0.61	1.22	
Triglycerides	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.9	77.9	108	7.50	15.00	
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	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.04	6.52	0.37	0.74	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.4	37.7	51.1	3.35	6.70	Bromocresol Green
	g/dl	4.44	3.77	5.11	0.34	0.67	
	g/l	44.0	37.4	50.6	3.30	6.60	Bromocresol Purple
	g/dl	4.40	3.74	5.06	0.33	0.66	
	g/l	41.3	35.1	47.5	3.10	6.20	Turbidimetric Assays
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	161	137	185	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	125	107	143	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	103	88	118	7.50	15.00	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 Pancreatic	U/l	70	59	81	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	90	77	103	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.5	10.7	16.3	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	16.4	13.0	19.8	1.70	3.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.959	0.761	1.16	0.10	0.20	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	16.3	12.9	19.7	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.954	0.755	1.15	0.10	0.20	
	µmol/l	16.5	13.1	19.9	1.70	3.40	Roche JG factored
	mg/dl	0.965	0.766	1.16	0.10	0.20	
Bilirubin Total	µmol/l	24.4	19.3	29.5	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.4	19.3	29.5	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazonium ion
mg/dl	1.44	1.14	1.74	0.15	0.30		
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	NM-BAPTA
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Chloride	mmol/l	101	93.2	109	3.90	7.80	ISE indirect
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	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	131	105	157	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	135	108	162	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.53	1.22	1.84	0.16	0.31	



## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	136	109	163	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.51	1.21	1.81	0.15	0.30	
gamma-GT	U/l	45	38	52	3.50	7.00	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	28	23	33	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	5.95	5.06	6.84	0.45	0.89	Glucose dehydrogenase
	mg/dl	107	91.2	123	7.90	15.80	
	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.52	1.30	1.74	0.11	0.22	Direct HDL PEGME
	mg/dl	58.7	50.2	67.2	4.25	8.50	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.0	47.5	64.5	4.25	8.50	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric with ppt.
	µg/dl	108	88.3	128	9.85	19.70	
	µmol/l	19.5	16.0	23.0	1.75	3.50	Colorimetric without ppt.
	µg/dl	109	89.4	129	9.80	19.60	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	377	321	433	28.00	56.00	P->L German methods 37°C
	U/l	272	232	312	20.00	40.00	P->L German methods 30°C
	U/l	191	163	219	14.00	28.00	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
Lithium	mmol/l	1.02	0.90	1.14	0.06	0.12	Ion selective electrode
	mg/dl	0.708	0.625	0.791	0.04	0.08	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.65	3.94	5.36	0.36	0.71	
	mmol/l	1.51	1.28	1.74	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.68	3.97	5.39	0.36	0.71	
Potassium	mmol/l	4.19	3.86	4.52	0.17	0.33	ISE method - indirect
Protein Total	g/l	56.1	44.8	67.4	5.65	11.30	Biuret reaction end point
	g/dl	5.61	4.48	6.74	0.57	1.13	
	g/l	54.9	43.9	65.9	5.50	11.00	Biuret reaction kinetic
	g/dl	5.49	4.39	6.59	0.55	1.10	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.5	31.2	47.8	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	221	174	268	23.50	47.00	

## COBAS INTEGRA®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.2	119	8.40	16.80	
	mmol/l	1.12	0.95	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.6	115	7.75	15.50	
Urea	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	87.6	120	8.20	16.40	
	mmol/l	7.03	5.97	8.09	0.53	1.06	Urease kinetic
	mg/dl	42.3	35.9	48.7	3.20	6.40	
Uric Acid (Urate)	mmol/l	7.03	5.98	8.08	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
Alkaline Phosphatase	U/l	277	235	319	21.00	42.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Total	µmol/l	29.2	23.1	35.3	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Creatinine	µmol/l	141	112	170	14.50	29.00	Alkaline picrate no deproteinization
	mg/dl	1.59	1.27	1.91	0.16	0.32	
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	200	170	230	15.00	30.00	L->P IFCC 37°C
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	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	
Triglycerides	mmol/l	1.16	0.98	1.34	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	103	86.4	120	8.30	16.60	

**Elitech/Vitalab Selectra Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	

## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	10.7	7.17	14.2	1.77	3.53	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Green
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	122	104	140	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	100	85	115	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	193	164	222	14.50	29.00	Radox AMP 37°C
	U/l	150	128	172	11.00	22.00	Radox AMP 30°C
	U/l	123	105	141	9.00	18.00	Radox AMP 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
Amylase Pancreatic	U/l	78	66	90	6.00	12.00	Radox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	74	102	7.00	14.00	Roche liquid stable pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Radox Liquid Ethylidene pNPG7 37°C
Bile Acids	µmol/l	25.1	20.1	30.1	2.50	5.00	5th Generation Colorimetric
Calcium	mmol/l	2.25	2.03	2.47	0.11	0.22	NM-BAPTA
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Chloride	mmol/l	96.5	88.8	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	

## HITACHI SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	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	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	36	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
Phosphate Inorganic	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	4.25	3.91	4.59	0.17	0.34	ISE method - indirect
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.3	119	8.35	16.70	
Urea	mmol/l	7.22	6.14	8.30	0.54	1.08	Urease kinetic
	mg/dl	43.4	36.9	49.9	3.25	6.50	
	mmol/l	7.22	6.14	8.30	0.54	1.08	BUN
	mg/dl	20.3	17.3	23.3	1.50	3.00	

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

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.4	34.3	46.5	3.05	6.10	Bromocresol Green
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	181	154	208	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	141	120	162	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	98	134	9.00	18.00	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	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	25.4	20.1	30.7	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	23.4	18.5	28.3	2.45	4.90	Nitrobenzenediazonium salt
	mg/dl	1.37	1.08	1.66	0.15	0.29	
Calcium	mmol/l	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Chloride	mmol/l	104	95.4	113	4.30	8.60	ISE direct
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
CK Total	U/l	207	169	245	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	130	106	154	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	88	72	104	8.00	16.00	CK-NAC (IFCC) 25°C



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

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	138	111	165	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.56	1.25	1.87	0.16	0.31	
	µmol/l	136	108	164	14.00	28.00	Jaffe rate blanked
	mg/dl	1.54	1.22	1.86	0.16	0.32	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	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
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase
	mg/dl	112	95.7	128	8.15	16.30	
	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose oxidase
	mg/dl	110	93.5	127	8.25	16.50	
HDL - Cholesterol	mmol/l	1.16	0.99	1.33	0.09	0.17	Direct HDL PEGME
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	1.25	1.07	1.43	0.09	0.18	Direct Clearance Method
	mg/dl	48.3	41.3	55.3	3.50	7.00	
Iron	µmol/l	19.9	16.3	23.5	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	91.1	131	9.95	19.90	
LD (LDH)	U/l	389	330	448	29.50	59.00	P->L SFBC 37°C
	U/l	281	238	324	21.50	43.00	P->L SFBC 30°C
	U/l	197	167	227	15.00	30.00	P->L SFBC 25°C
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	

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

Lot. No. 1376UN    Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml    Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.09	3.76	4.42	0.17	0.33	ISE method - direct
Protein Total	g/l	58.3	46.6	70.0	5.85	11.70	Biuret reaction end point
	g/dl	5.83	4.66	7.00	0.59	1.17	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.9	117	8.05	16.10	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.01	5.24	6.78	0.39	0.77	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	
mg/dl	6.06	5.28	6.84	0.39	0.78		

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	211	167	255	22.00	44.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	159	126	192	16.50	33.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	119	95	143	12.00	24.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	10.7	7.17	14.2	1.77	3.53	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	44.2	37.6	50.8	3.30	6.60	Bromocresol Purple
	g/dl	4.42	3.76	5.08	0.33	0.66	
	g/l	40.9	34.8	47.0	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.09	3.48	4.70	0.31	0.61	
	g/l	41.6	35.3	47.9	3.15	6.30	Turbidimetric Assays
g/dl	4.16	3.53	4.79	0.32	0.63		
Alkaline Phosphatase	U/l	159	135	183	12.00	24.00	Ortho Vitros Microslide Systems 37°C
	U/l	284	241	327	21.50	43.00	Diethanolamine buffer DEA 37°C
	U/l	221	188	254	16.50	33.00	Diethanolamine buffer DEA 30°C
	U/l	181	154	208	13.50	27.00	Diethanolamine buffer DEA 25°C
	U/l	190	162	218	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	148	126	170	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	121	104	138	8.50	17.00	AMP optimised to IFCC 25°C
	U/l	187	159	215	14.00	28.00	AMP optimised to NVKC/SFBC 37°C
	U/l	146	124	168	11.00	22.00	AMP optimised to NVKC/SFBC 30°C
U/l	119	102	136	8.50	17.00	AMP optimised to NVKC/SFBC 25°C	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Alkaline Phosphatase	U/l	182	154	210	14.00	28.00	AMP non-optimised 37°C
	U/l	142	120	164	11.00	22.00	AMP non-optimised 30°C
	U/l	116	98	134	9.00	18.00	AMP non-optimised 25°C
ALT (GPT)	U/l	47	37	57	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	40	32	48	4.00	8.00	Tris buffer with P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer with P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer with P5P 25°C
	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
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer SCE 30°C
U/l	20	16	24	2.00	4.00	Tris buffer SCE 25°C	
Amylase Pancreatic	U/l	68	57	79	5.50	11.00	Immunoinhibition EPS substrate 37°C
	U/l	68	57	79	5.50	11.00	Roche EPS Liquid 37°C
	U/l	78	66	90	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	pNP Maltotriose substrates 37°C
	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	75	64	86	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	97	83	111	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	88	74	102	7.00	14.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Saccharogenic 37°C
	U/l	90	76	104	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	68	58	78	5.00	10.00	Ortho Vitros Microslide Systems 37°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	97	83	111	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	107	91	123	8.00	16.00	Abbott Architect IFCC Cal. 37°C
	U/l	87	74	100	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
Apolipoprotein A-1	g/l	1.27	1.04	1.50	0.12	0.23	Immunoturbidimetric
	mg/dl	127	104	150	11.50	23.00	
Apolipoprotein B	g/l	0.57	0.47	0.67	0.05	0.10	Immunoturbidimetric
	mg/dl	57.1	46.8	67.4	5.15	10.30	
AST (GOT)	U/l	53	43	63	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
	U/l	53	42	64	5.50	11.00	Tris buffer with P5P 37°C
	U/l	36	28	44	4.00	8.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	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
	U/l	33	26	40	3.50	7.00	Tris buffer SCE 37°C
	U/l	22	18	26	2.00	4.00	Tris buffer SCE 30°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Colorimetric
	mmol/l	14.6	11.6	17.6	1.50	3.00	Ortho Vitros Microslide Systems
	mmol/l	12.7	10.1	15.3	1.30	2.60	Differential rate pH change
	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Ion selective electrode
Bile Acids	µmol/l	26.9	21.5	32.3	2.70	5.40	4th Generation Colorimetric
	µmol/l	25.1	20.1	30.1	2.50	5.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	17.4	13.8	21.0	1.80	3.60	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	Diazo with Sulphanilic Acid
	mg/dl	1.01	0.796	1.22	0.11	0.21	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.08	0.848	1.31	0.12	0.23	
	µmol/l	16.1	12.7	19.5	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.942	0.743	1.14	0.10	0.20	
Bilirubin Total	µmol/l	13.0	10.3	15.7	1.35	2.70	Modified Jendrassik
	mg/dl	0.761	0.603	0.919	0.08	0.16	
	µmol/l	23.4	18.5	28.3	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.37	1.08	1.66	0.15	0.29	
	µmol/l	30.2	23.9	36.5	3.15	6.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.77	1.40	2.14	0.19	0.37	
	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	
Bilirubin Total	µmol/l	25.0	19.7	30.3	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.46	1.15	1.77	0.16	0.31	
	µmol/l	23.4	18.5	28.3	2.45	4.90	Nitrobenzenediazonium salt
	mg/dl	1.37	1.08	1.66	0.15	0.29	
	µmol/l	25.3	20.0	30.6	2.65	5.30	Diazonium ion
	mg/dl	1.48	1.17	1.79	0.16	0.31	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.35	2.05	0.18	0.35	
	µmol/l	31.7	25.0	38.4	3.35	6.70	Modified Jendrassik
	mg/dl	1.85	1.46	2.24	0.20	0.39	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.28	2.05	2.51	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.14	8.22	10.1	0.46	0.92	
	mmol/l	2.17	1.95	2.39	0.11	0.22	Ion selective electrode
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	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	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	1.03	0.93	1.13	0.05	0.10	Ionised calcium
	mg/dl	4.13	3.72	4.54	0.21	0.41	
Chloride	mmol/l	103	94.8	111	4.10	8.20	Colorimetric
	mmol/l	101	92.9	109	4.05	8.10	Ortho Vitros Microslide Systems
	mmol/l	100	92.1	108	3.95	7.90	ISE indirect
	mmol/l	101	93.0	109	4.00	8.00	ISE direct
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	152	132	172	10.00	20.00	
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase
	mg/dl	155	135	175	10.00	20.00	
Cholinesterase	U/l	5453	4362	6544	545.50	1091.00	Colorimetric Butyrylthiocholine 37°C

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### 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
	U/l	202	166	238	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	126	104	148	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	197	162	232	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	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
	U/l	214	176	252	19.00	38.00	Monothioglycerol 37°C
	U/l	134	110	158	12.00	24.00	Monothioglycerol 30°C
U/l	91	75	107	8.00	16.00	Monothioglycerol 25°C	
Copper	µmol/l	16.2	12.9	19.5	1.65	3.30	Atomic absorption
	µg/dl	103	82.0	124	10.50	21.00	
	µmol/l	16.1	12.9	19.3	1.60	3.20	Colorimetric
	µg/dl	102	82.0	122	10.00	20.00	
Cortisol	nmol/l	559	419	699	70.00	140.00	Roche Cobas E411
	µg/dl	20.1	15.1	25.1	2.50	5.00	
Creatinine	µmol/l	132	106	158	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	138	110	166	14.00	28.00	Enzymatic UV method
	mg/dl	1.56	1.24	1.88	0.16	0.32	



## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	μmol/l	137	109	165	14.00	28.00	Creatinine PAP method
	mg/dl	1.55	1.23	1.87	0.16	0.32	
	μmol/l	137	110	164	13.50	27.00	Jaffe rate blanked
	mg/dl	1.55	1.24	1.86	0.16	0.31	
	μmol/l	138	110	166	14.00	28.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.56	1.24	1.88	0.16	0.32	
	μmol/l	133	107	159	13.00	26.00	Jaffe rate blanked compensated (-18 μmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
μmol/l	135	108	162	13.50	27.00	Vitros IDMS Traceable	
mg/dl	1.53	1.22	1.84	0.16	0.31		
μmol/l	135	108	162	13.50	27.00	IDMS traceable	
mg/dl	1.53	1.22	1.84	0.16	0.31		
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.25	1.80	2.70	0.23	0.45	Immunoturbidimetric
	ng/ml	1.76	1.41	2.11	0.18	0.35	
Folate	nmol/l	32.6	24.8	40.4	3.90	7.80	Roche Cobas E411
	ng/ml	14.4	10.9	17.9	1.75	3.50	
Free T4	pmol/l	16.9	12.7	21.1	2.10	4.20	Abbott Architect
	ng/dl	1.32	0.991	1.65	0.16	0.33	
	pg/ml	13.2	9.91	16.5	1.65	3.29	Abbott Architect
	pmol/l	17.8	13.3	22.3	2.25	4.50	
	ng/dl	1.39	1.04	1.74	0.18	0.35	Siemens Centaur XP/XPT/Classic
	pg/ml	13.9	10.4	17.4	1.75	3.50	
	pmol/l	18.4	13.8	23.0	2.30	4.60	Beckman Access
	ng/dl	1.44	1.08	1.80	0.18	0.36	
pg/ml	14.4	10.8	18.0	1.80	3.60	Beckman Access	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Free T4	pmol/l	17.7	13.2	22.2	2.25	4.50	Beckman Dxl800
	ng/dl	1.38	1.03	1.73	0.18	0.35	
	pg/ml	13.8	10.3	17.3	1.75	3.50	Beckman Dxl800
	pmol/l	37.5	28.1	46.9	4.70	9.40	Vitros ECi
	ng/dl	2.93	2.19	3.67	0.37	0.74	
	pg/ml	29.3	21.9	36.7	3.70	7.40	Vitros ECi
	pmol/l	21.6	16.2	27.0	2.70	5.40	Roche Cobas E411
	ng/dl	1.68	1.26	2.10	0.21	0.42	
	pg/ml	16.8	12.6	21.0	2.10	4.20	Roche Cobas E411
		pmol/l	21.9	16.4	27.4	2.75	5.50
	ng/dl	1.71	1.28	2.14	0.22	0.43	
	pg/ml	17.1	12.8	21.4	2.15	4.30	Roche Cobas 6000/8000
Gentamicin	µmol/l	7.80	6.24	9.36	0.78	1.56	Immunoturbidimetric
	µg/ml	3.73	2.98	4.48	0.38	0.75	
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	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	26	22	30	2.00	4.00	Gamma glutamyl-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

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
gamma-GT	U/l	59	50	68	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C	
	U/l	46	39	53	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C	
	U/l	36	31	41	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C	
GLDH	U/l	20	15	25	2.50	5.00	Triethanolamine buffer 50 mmol 37°C	
	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 30°C	
	U/l	12	9	15	1.50	3.00	Triethanolamine buffer 50 mmol 25°C	
Glucose	mmol/l	5.96	5.06	6.86	0.45	0.90	Ortho Vitros Microslide Systems	
	mg/dl	107	91.2	123	7.90	15.80		
	mmol/l	6.05	5.14	6.96	0.46	0.91	Glucose dehydrogenase	
	mg/dl	109	92.6	125	8.20	16.40		
	mmol/l	6.12	5.20	7.04	0.46	0.92	Hexokinase	
	mg/dl	110	93.7	126	8.15	16.30		
	mmol/l	5.96	5.07	6.85	0.45	0.89	Oxygen electrode	
	mg/dl	107	91.4	123	7.80	15.60		
	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose oxidase	
	mg/dl	110	93.7	126	8.15	16.30		
	HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL PPD
		mg/dl	51.0	43.2	58.8	3.90	7.80	
mmol/l		1.27	1.08	1.46	0.10	0.19	Direct HDL Immunoseparation	
mg/dl		49.0	41.7	56.3	3.65	7.30		
mmol/l		1.22	1.04	1.40	0.09	0.18	Vitros Magnetic HDL	
mg/dl		47.1	40.1	54.1	3.50	7.00		
mmol/l		1.23	1.04	1.42	0.10	0.19	Direct Clearance Method	
mg/dl		47.5	40.1	54.9	3.70	7.40		
mmol/l		1.23	1.05	1.41	0.09	0.18	Vitros dHDL PTA/MgCl2 direct precipitation	
mg/dl		47.5	40.5	54.5	3.50	7.00		

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.32	1.12	1.52	0.10	0.20	HDL - Ultra
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Immunoglobulin A	g/l	1.66	1.25	2.07	0.21	0.41	Immunoturbidimetric
	mg/dl	166	125	207	20.50	41.00	
Immunoglobulin G	g/l	6.97	5.72	8.22	0.63	1.25	Immunoturbidimetric
	mg/dl	697	572	822	62.50	125.00	
Immunoglobulin M	g/l	0.64	0.51	0.77	0.06	0.13	Immunoturbidimetric
	mg/dl	63.9	51.1	76.7	6.40	12.80	
Iron	µmol/l	19.1	15.7	22.5	1.70	3.40	Colorimetric with ppt.
	µg/dl	107	87.8	126	9.60	19.20	
	µmol/l	19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.
	µg/dl	107	88.3	126	9.35	18.70	
	µmol/l	20.0	16.4	23.6	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	112	91.7	132	10.15	20.30	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Ion selective electrode
	mg/dl	13.4	11.0	15.8	1.20	2.40	
	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
	mmol/l	1.43	1.17	1.69	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.9	10.5	15.3	1.20	2.40	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Enzymatic Electrode
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LAP	U/l	18	15	21	1.50	3.00	NAGEL 37°C
LD (LDH)	U/l	177	151	203	13.00	26.00	L->P 37°C
	U/l	128	109	147	9.50	19.00	L->P 30°C
	U/l	90	77	103	6.50	13.00	L->P 25°C
	U/l	417	354	480	31.50	63.00	P->L Scandinavian & Dutch 37°C
	U/l	301	256	346	22.50	45.00	P->L Scandinavian & Dutch 30°C
	U/l	211	179	243	16.00	32.00	P->L Scandinavian & Dutch 25°C
	U/l	385	327	443	29.00	58.00	P->L German methods 37°C
	U/l	278	236	320	21.00	42.00	P->L German methods 30°C
	U/l	195	166	224	14.50	29.00	P->L German methods 25°C
	U/l	386	328	444	29.00	58.00	P->L SFBC 37°C
	U/l	279	237	321	21.00	42.00	P->L SFBC 30°C
	U/l	196	166	226	15.00	30.00	P->L SFBC 25°C
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
	U/l	144	122	166	11.00	22.00	L->P IFCC 30°C
U/l	101	86	116	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
	U/l	176	141	211	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.06	0.93	1.19	0.07	0.13	Ion selective electrode
	mg/dl	0.736	0.645	0.827	0.05	0.09	
	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.640	0.818	0.04	0.09	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Radox 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	Arsenazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.19	1.92	2.46	0.14	0.27	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Calmagite
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.87	0.77	0.98	0.05	0.10	Methylthymol blue
	mg/dl	2.12	1.86	2.38	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.96	2.48	0.13	0.26	
mmol/l	0.88	0.77	0.98	0.05	0.11	Enzymatic	
mg/dl	2.13	1.87	2.39	0.13	0.26		
NEFA	mmol/l	1.55	1.32	1.78	0.12	0.23	Colorimetric
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
	mOsm/kg	308	246	370	31.00	62.00	Freezing point depression
Paracetamol	mmol/l	0.08	0.06	0.09	0.01	0.02	Colorimetric
	mg/l	11.8	9.53	14.1	1.14	2.27	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.74	4.03	5.45	0.36	0.71	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.26	3.92	4.60	0.17	0.34	Ortho Vitros Microslide Systems
	mmol/l	4.18	3.85	4.51	0.17	0.33	Enzymatic
	mmol/l	4.15	3.82	4.48	0.17	0.33	ISE method - direct
	mmol/l	4.21	3.87	4.55	0.17	0.34	ISE method - indirect
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.89	4.71	7.07	0.59	1.18	
	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	
	g/l	58.4	46.7	70.1	5.85	11.70	Biuret reaction kinetic
	g/dl	5.84	4.67	7.01	0.59	1.17	
PSA Total	ng/ml =	15.4	11.5	19.3	1.95	3.90	Roche Elecsys Modular E170
	ng/ml =	16.0	12.0	20.0	2.00	4.00	Beckman Access standardised to Hybritech
	ng/ml =	13.3	9.97	16.6	1.67	3.33	bioMerieux VIDAS TPSA
	ng/ml =	10.8	8.13	13.5	1.34	2.67	Abbott Architect
	ng/ml =	15.4	11.5	19.3	1.95	3.90	Cobas E411
	ng/ml =	14.5	10.9	18.1	1.80	3.60	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	144	136	152	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	143	136	150	3.50	7.00	ISE method - indirect



## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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 =	0.95	0.76	1.14	0.10	0.19	Abbott Architect
	µU/ml =	1.48	1.19	1.77	0.15	0.29	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.32	1.06	1.58	0.13	0.26	bioMerieux VIDAS TSH
	µU/ml =	1.27	1.01	1.53	0.13	0.26	Siemens Immulite 2000/2500
	µU/ml =	1.13	0.90	1.36	0.11	0.23	Vitros ECi
	µU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Cobas E411
	µU/ml =	1.38	1.10	1.66	0.14	0.28	Roche Cobas 6000/8000
	µU/ml =	1.10	0.88	1.32	0.11	0.22	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.09	0.87	1.31	0.11	0.22	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	47.4	37.5	57.3	4.95	9.90	Ortho Vitros Microslide Systems
	µg/dl	265	210	320	27.50	55.00	
	µmol/l	40.1	31.7	48.5	4.20	8.40	Removal of excess free iron
	µg/dl	224	177	271	23.50	47.00	
	µmol/l	40.2	31.7	48.7	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	225	177	273	24.00	48.00	
	µmol/l	46.5	36.7	56.3	4.90	9.80	Direct Colorimetric
	µg/dl	260	205	315	27.50	55.00	
	µmol/l	45.1	35.6	54.6	4.75	9.50	Calculated from Transferrin
	µg/dl	252	199	305	26.50	53.00	
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	





## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	2.38	1.79	2.97	0.30	0.59	Beckman Access
	ng/ml	1.55	1.17	1.93	0.19	0.38	
	ng/dl	155	117	193	19.00	38.00	Beckman Access
	nmol/l	2.56	1.92	3.20	0.32	0.64	Siemens Centaur XP/XPT/Classic
	ng/ml	1.67	1.25	2.09	0.21	0.42	
	ng/dl	167	125	209	21.00	42.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.53	1.89	3.17	0.32	0.64	Roche Cobas E411
	ng/ml	1.65	1.23	2.07	0.21	0.42	
	ng/dl	165	123	207	21.00	42.00	Roche Cobas E411
	nmol/l	2.50	1.88	3.12	0.31	0.62	Roche Cobas 6000/8000
	ng/ml	1.63	1.22	2.04	0.21	0.41	
	ng/dl	163	122	204	20.50	41.00	Roche Cobas 6000/8000
Total T4	nmol/l	93.7	70.2	117	11.75	23.50	Abbott Architect
	µg/dl	7.31	5.48	9.14	0.92	1.83	
	ng/ml	73.1	54.8	91.4	9.15	18.30	Abbott Architect
	nmol/l	85.2	63.9	107	10.65	21.30	Siemens Centaur XP/XPT/Classic
	µg/dl	6.65	4.98	8.32	0.84	1.67	
	ng/ml	66.5	49.8	83.2	8.35	16.70	Siemens Centaur XP/XPT/Classic
	nmol/l	88.2	66.1	110	11.05	22.10	Roche Cobas E411
	µg/dl	6.88	5.16	8.60	0.86	1.72	
	ng/ml	68.8	51.6	86.0	8.60	17.20	Roche Cobas E411
	nmol/l	89.0	66.7	111	11.15	22.30	Roche Cobas 6000/8000
	µg/dl	6.94	5.20	8.68	0.87	1.74	
	ng/ml	69.4	52.0	86.8	8.70	17.40	Roche Cobas 6000/8000

## MEAN OF ALL INSTRUMENTS

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Transferrin	g/l	1.94	1.55	2.33	0.20	0.39	Immunoturbidimetric
	mg/dl	194	155	233	19.50	39.00	
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.3	116	7.85	15.70	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	100	84.1	116	7.95	15.90	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.6	117	8.20	16.40	
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	102	85.3	119	8.35	16.70	
mmol/l	1.26	1.05	1.47	0.11	0.21	Ortho Vitros Microslide Systems	
mg/dl	112	92.9	131	9.55	19.10		
UIBC	µmol/l	20.4	16.7	24.1	1.85	3.70	Direct Colorimetric
	µg/dl	114	93.4	135	10.30	20.60	
Urea	mmol/l	6.86	5.83	7.89	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	7.32	6.22	8.42	0.55	1.10	Urease end point
	mg/dl	44.0	37.4	50.6	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease kinetic
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.27	6.18	8.36	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.63	4.91	6.35	0.36	0.72	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.07	6.63	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	
Vitamin B12	pmol/l	495	396	594	49.50	99.00	Roche Cobas E411
	pg/ml	671	537	805	67.00	134.00	
Zinc	μmol/l	22.6	18.1	27.1	2.25	4.50	Colorimetric with deproteinisation
	μg/dl	148	118	178	15.00	30.00	

**MEAN OF ALL INSTRUMENTS (Elec.)****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		68.7	61.9	75.5	3.40	6.80	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.1	3.9	6.3	0.61	1.22	% of total Protein (Beckman Capillary)
alpha-2-globulin		6.3	4.8	7.8	0.76	1.51	% of total Protein (Beckman Capillary)
beta-globulin		10.3	7.8	12.8	1.24	2.47	% of total Protein (Beckman Capillary)
gamma-globulin		9.6	7.3	11.9	1.15	2.30	% of total Protein (Beckman Capillary)

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Green
	g/dl	4.29	3.65	4.93	0.32	0.64	
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	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
Bilirubin Direct	µmol/l	17.5	13.8	21.2	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.02	0.807	1.23	0.11	0.21	
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	24.5	19.4	29.6	2.55	5.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	28.4	22.5	34.3	2.95	5.90	Oxidation to Biliverdin/Vanadate
mg/dl	1.66	1.32	2.00	0.17	0.34		
Calcium	mmol/l	2.25	2.03	2.47	0.11	0.22	Arsenazo III
	mg/dl	9.02	8.14	9.90	0.44	0.88	
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	139	179	10.00	20.00	
Cholinesterase	U/l	5463	4370	6556	546.50	1093.00	Colorimetric Butyrylthiocholine 37°C

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
CK Total	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked
Glucose	mg/dl	1.58	1.27	1.89	0.16	0.31	
	mmol/l	6.25	5.32	7.18	0.47	0.93	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL PPD
Iron	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct Clearance Method
	mg/dl	49.0	41.7	56.3	3.65	7.30	
Iron	µmol/l	19.6	16.1	23.1	1.75	3.50	Colorimetric without ppt.
	µg/dl	110	90.0	130	10.00	20.00	
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	391	332	450	29.50	59.00	P->L SFBC 37°C
	U/l	282	240	324	21.00	42.00	P->L SFBC 30°C
	U/l	198	168	228	15.00	30.00	P->L SFBC 25°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
	U/l	146	124	168	11.00	22.00	L->P IFCC 30°C
U/l	102	87	117	7.50	15.00	L->P IFCC 25°C	

## MINDRAY BS-200/300/400

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.44	1.23	1.65	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.46	3.81	5.11	0.33	0.65	
Protein Total	g/l	60.1	48.1	72.1	6.00	12.00	Biuret reaction end point
	g/dl	6.01	4.81	7.21	0.60	1.20	
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	7.50	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	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.20	5.39	7.01	0.41	0.81	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

## Ortho VITROS®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	40.9	34.8	47.0	3.05	6.10	Ortho Vitros Microslide Systems
	g/dl	4.09	3.48	4.70	0.31	0.61	
	g/l	41.8	35.5	48.1	3.15	6.30	Vitros DT60/DT60 II/DTSC II
	g/dl	4.18	3.55	4.81	0.32	0.63	
Alkaline Phosphatase	U/l	159	135	183	12.00	24.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	47	37	57	5.00	10.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	68	58	78	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	53	43	63	5.00	10.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.6	11.6	17.6	1.50	3.00	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	9.85	7.78	11.9	1.04	2.07	BuBc Vitros Slide
	mg/dl	0.576	0.455	0.697	0.06	0.12	
Bilirubin Total	µmol/l	23.4	18.5	28.3	2.45	4.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.37	1.08	1.66	0.15	0.29	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.4	10.6	16.2	1.40	2.80	BuBc Vitros Slide
	mg/dl	0.784	0.620	0.948	0.08	0.16	
Calcium	mmol/l	2.28	2.05	2.51	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	9.14	8.22	10.1	0.46	0.92	
Chloride	mmol/l	101	92.9	109	4.05	8.10	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	3.93	3.42	4.44	0.26	0.51	Ortho Vitros Microslide Systems
	mg/dl	152	132	172	10.00	20.00	
CK Total	U/l	187	153	221	17.00	34.00	Ortho Vitros Microslide Systems 37°C



## Ortho VITROS®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	143	114	172	14.50	29.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.62	1.29	1.95	0.17	0.33	
	µmol/l	135	108	162	13.50	27.00	Vitros IDMS Traceable
	mg/dl	1.53	1.22	1.84	0.16	0.31	
Free T4	pmol/l	37.5	28.1	46.9	4.70	9.40	Vitros ECi
	ng/dl	2.93	2.19	3.67	0.37	0.74	Vitros ECi
	pg/ml	29.3	21.9	36.7	3.70	7.40	
gamma-GT	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	5.96	5.06	6.86	0.45	0.90	Ortho Vitros Microslide Systems
	mg/dl	107	91.2	123	7.90	15.80	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Vitros Magnetic HDL
	mg/dl	47.1	40.1	54.1	3.50	7.00	Vitros 5.1 FS microtip assay
	mmol/l	1.33	1.13	1.53	0.10	0.20	
	mg/dl	51.3	43.6	59.0	3.85	7.70	
	mmol/l	1.23	1.05	1.41	0.09	0.18	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
mg/dl	47.5	40.5	54.5	3.50	7.00		
Iron	µmol/l	20.0	16.4	23.6	1.80	3.60	Ortho Vitros Microslide Systems
	µg/dl	112	91.7	132	10.15	20.30	
Lactate	mmol/l	1.43	1.17	1.69	0.13	0.26	Ortho Vitros Microslide Systems
	mg/dl	12.9	10.5	15.3	1.20	2.40	
Lipase	U/l	176	141	211	17.50	35.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.23	1.09	1.37	0.07	0.14	Ortho Vitros Microslide Systems
	mg/dl	0.854	0.757	0.951	0.05	0.10	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.19	1.92	2.46	0.14	0.27	

## Ortho VITROS®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Ortho Vitros Microslide Systems
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Potassium	mmol/l	4.26	3.92	4.60	0.17	0.34	Ortho Vitros Microslide Systems
Protein Total	g/l	58.9	47.1	70.7	5.90	11.80	Ortho Vitros Microslide Systems
	g/dl	5.89	4.71	7.07	0.59	1.18	
Sodium	mmol/l	144	136	152	4.00	8.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.13	0.90	1.36	0.11	0.23	Vitros ECi
TIBC	µmol/l	47.4	37.5	57.3	4.95	9.90	Ortho Vitros Microslide Systems
	µg/dl	265	210	320	27.50	55.00	
Triglycerides	mmol/l	1.26	1.05	1.47	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	112	92.9	131	9.55	19.10	
Urea	mmol/l	6.86	5.83	7.89	0.52	1.03	Ortho Vitros Microslide Systems
	mg/dl	41.2	35.0	47.4	3.10	6.20	
	mmol/l	6.86	5.83	7.89	0.52	1.03	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.63	4.91	6.35	0.36	0.72	

## PRESTIGE 24i

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	254	216	292	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	198	168	228	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	162	138	186	12.00	24.00	Diethanolamine buffer DEA 25°C
	U/l	182	155	209	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	142	121	163	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	116	99	133	8.50	17.00	AMP optimised to IFCC 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
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
Bilirubin Total	µmol/l	23.9	18.9	28.9	2.50	5.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.40	1.11	1.69	0.15	0.29	
Calcium	mmol/l	2.29	2.06	2.52	0.12	0.23	Arsenazo III
	mg/dl	9.18	8.26	10.1	0.46	0.92	
Cholesterol	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	135	177	10.50	21.00	
Glucose	mmol/l	5.94	5.05	6.83	0.45	0.89	Glucose oxidase
	mg/dl	107	91.0	123	8.00	16.00	

## PRESTIGE 24i

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	423	360	486	31.50	63.00	P->L German methods 37°C
	U/l	305	260	350	22.50	45.00	P->L German methods 30°C
	U/l	214	183	245	15.50	31.00	P->L German methods 25°C
Protein Total	g/l	61.7	49.3	74.1	6.20	12.40	Biuret reaction end point
	g/dl	6.17	4.93	7.41	0.62	1.24	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease kinetic
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	mmol/l	7.29	6.20	8.38	0.55	1.09	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.98	5.19	6.77	0.40	0.79	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.7	37.1	50.3	3.30	6.60	Bromocresol Green
	g/dl	4.37	3.71	5.03	0.33	0.66	
	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Purple
	g/dl	4.38	3.72	5.04	0.33	0.66	
	g/l	41.5	35.3	47.7	3.10	6.20	Turbidimetric Assays
	g/dl	4.15	3.53	4.77	0.31	0.62	
Alkaline Phosphatase	U/l	157	133	181	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	122	104	140	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	100	85	115	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	57	75	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.4	10.6	16.2	1.40	2.80	Colorimetric
	mmol/l	13.4	10.7	16.1	1.35	2.70	Enzymatic

## Roche Cobas 6000 c501 e601

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bile Acids	µmol/l	24.7	19.7	29.7	2.50	5.00	Enzymatic Colorimetric
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	17.0	13.4	20.6	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	0.995	0.784	1.21	0.11	0.21	
Bilirubin Total	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	
	µmol/l	25.2	19.9	30.5	2.65	5.30	Diazo with Sulphanilic Acid
	mg/dl	1.47	1.16	1.78	0.16	0.31	
Bilirubin Total	µmol/l	25.3	20.0	30.6	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.48	1.17	1.79	0.16	0.31	
	µmol/l	25.4	20.0	30.8	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.17	1.81	0.16	0.32	
Calcium	mmol/l	2.22	2.00	2.44	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.90	8.02	9.78	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	NM-BAPTA
Calcium	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	97.1	89.4	105	3.85	7.70	ISE indirect
Chloride	mmol/l	97.1	89.4	105	3.85	7.70	ISE indirect
	mmol/l	3.95	3.44	4.46	0.26	0.51	Cholesterol Oxidase
Cholesterol	mg/dl	152	133	171	9.50	19.00	
	U/l	5328	4262	6394	533.00	1066.00	Colorimetric Butyrylthiocholine 37°C
Cholinesterase	U/l	187	154	220	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	117	96	138	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	79	65	93	7.00	14.00	CK-NAC substrate start (DGKC) 25°C
	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

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	μmol/l	139	111	167	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	μmol/l	141	113	169	14.00	28.00	Enzymatic UV method
	mg/dl	1.59	1.28	1.90	0.16	0.31	
	μmol/l	141	113	169	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.59	1.28	1.90	0.16	0.31	
	μmol/l	143	114	172	14.50	29.00	Jaffe rate blanked
	mg/dl	1.62	1.29	1.95	0.17	0.33	
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	21.9	16.4	27.4	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.71	1.28	2.14	0.22	0.43	
	pg/ml	17.1	12.8	21.4	2.15	4.30	Roche Cobas 6000/8000
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	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	35	45	2.50	5.00	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
GLDH	U/l	18	14	22	2.00	4.00	Triethanolamine buffer 50 mmol 37°C
	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	11	9	13	1.00	2.00	Triethanolamine buffer 50 mmol 25°C

## Roche Cobas 6000 c501 e601

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Glucose	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	6.14	5.22	7.06	0.46	0.92	Hexokinase	
	mg/dl	111	94.1	128	8.45	16.90		
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PEGME	
	mg/dl	55.2	47.1	63.3	4.05	8.10		
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL Roche 3rd generation	
	mg/dl	54.8	46.7	62.9	4.05	8.10		
Iron	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL Roche 4th Generation	
	mg/dl	55.2	46.7	63.7	4.25	8.50		
	Iron	μmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric with ppt.
		μg/dl	105	86.1	124	9.45	18.90	
μmol/l		19.2	15.8	22.6	1.70	3.40	Colorimetric without ppt.	
μg/dl		107	88.3	126	9.35	18.70		
Lactate	mmol/l	1.56	1.28	1.84	0.14	0.28	Colorimetric Lactate Oxidase	
	mg/dl	14.1	11.5	16.7	1.30	2.60		
LD (LDH)	U/l	193	164	222	14.50	29.00	L->P 37°C	
	U/l	139	118	160	10.50	21.00	L->P 30°C	
	U/l	98	83	113	7.50	15.00	L->P 25°C	
	U/l	381	324	438	28.50	57.00	P->L German methods 37°C	
	U/l	275	234	316	20.50	41.00	P->L German methods 30°C	
	U/l	193	164	222	14.50	29.00	P->L German methods 25°C	
	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C	
	U/l	144	122	166	11.00	22.00	L->P IFCC 30°C	
	U/l	101	86	116	7.50	15.00	L->P IFCC 25°C	



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.05	0.93	1.17	0.06	0.12	Spectrophotometric
	mg/dl	0.729	0.644	0.814	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.19	1.93	2.45	0.13	0.26	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.46	1.24	1.68	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.53	3.84	5.22	0.35	0.69	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.56	3.88	5.24	0.34	0.68	
Potassium	mmol/l	4.26	3.92	4.60	0.17	0.34	ISE method - indirect
Protein Total	g/l	59.5	47.6	71.4	5.95	11.90	Biuret reaction end point
	g/dl	5.95	4.76	7.14	0.60	1.19	
	g/l	62.4	49.9	74.9	6.25	12.50	Biuret reaction kinetic
	g/dl	6.24	4.99	7.49	0.63	1.25	
PSA Total	ng/ml =	14.5	10.9	18.1	1.80	3.60	Roche Cobas 6000/8000
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.38	1.10	1.66	0.14	0.28	Roche Cobas 6000/8000
TIBC	μmol/l	38.6	30.5	46.7	4.05	8.10	FE+UIBC(saturation with iron)
	μg/dl	216	170	262	23.00	46.00	
	μmol/l	48.2	38.1	58.3	5.05	10.10	Calculated from Transferrin
	μg/dl	269	213	325	28.00	56.00	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.50	1.88	3.12	0.31	0.62	Roche Cobas 6000/8000
	ng/ml	1.63	1.22	2.04	0.21	0.41	
	ng/dl	163	122	204	20.50	41.00	Roche Cobas 6000/8000
Total T4	nmol/l	89.0	66.7	111	11.15	22.30	Roche Cobas 6000/8000
	µg/dl	6.94	5.20	8.68	0.87	1.74	
	ng/ml	69.4	52.0	86.8	8.70	17.40	Roche Cobas 6000/8000
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	
	mmol/l	1.17	0.98	1.36	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	87.1	121	8.45	16.90	
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	103	86.2	120	8.40	16.80	
	µmol/l	19.4	15.9	22.9	1.75	3.50	Direct Colorimetric
	µg/dl	108	88.9	127	9.55	19.10	
Urea	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease end point
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.23	6.15	8.31	0.54	1.08	Urease kinetic
	mg/dl	43.5	37.0	50.0	3.25	6.50	
Urea	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	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

**Roche Cobas 6000 c501 e601**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	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	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.1	50.3	3.30	6.60	Bromocresol Green
	g/dl	4.37	3.71	5.03	0.33	0.66	
Alkaline Phosphatase	U/l	160	136	184	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	125	106	144	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	102	87	117	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	166	141	191	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	129	110	148	9.50	19.00	AMP optimised to IFCC 30°C
	U/l	106	90	122	8.00	16.00	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 Total	U/l	91	77	105	7.00	14.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	13.1	10.4	15.8	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	16.0	12.6	19.4	1.70	3.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.936	0.737	1.14	0.10	0.20	
	µmol/l	16.7	13.2	20.2	1.75	3.50	Diazo with Sulphanilic Acid
	mg/dl	0.977	0.772	1.18	0.10	0.21	
Bilirubin Total	µmol/l	24.1	19.0	29.2	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.41	1.11	1.71	0.15	0.30	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Bilirubin Total	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	24.5	19.3	29.7	2.60	5.20	Diazonium ion
	mg/dl	1.43	1.13	1.73	0.15	0.30	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.24	2.02	2.46	0.11	0.22	NM-BAPTA
	mg/dl	8.98	8.10	9.86	0.44	0.88	
Chloride	mmol/l	102	93.9	110	4.05	8.10	ISE indirect
Cholesterol	mmol/l	3.97	3.45	4.49	0.26	0.52	Cholesterol Oxidase
	mg/dl	153	133	173	10.00	20.00	
CK Total	U/l	182	149	215	16.50	33.00	CK-NAC (IFCC) 37°C
	U/l	114	93	135	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	136	108	164	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	134	108	160	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.51	1.22	1.80	0.15	0.29	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.24	5.31	7.17	0.47	0.93	Hexokinase
	mg/dl	112	95.7	128	8.15	16.30	

## Roche Cobas C111®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
LD (LDH)	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
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.74	4.03	5.45	0.36	0.71	
	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Potassium	mmol/l	4.17	3.84	4.50	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.0	48.0	72.0	6.00	12.00	Biuret reaction end point
	g/dl	6.00	4.80	7.20	0.60	1.20	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	
	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	100	83.9	116	8.05	16.10	
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	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	

**Roche Cobas C111®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
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	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.81	5.06	6.56	0.38	0.75	

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	43.9	37.3	50.5	3.30	6.60	Bromocresol Green
	g/dl	4.39	3.73	5.05	0.33	0.66	
	g/l	44.0	37.4	50.6	3.30	6.60	Bromocresol Purple
	g/dl	4.40	3.74	5.06	0.33	0.66	
Alkaline Phosphatase	U/l	155	132	178	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	121	103	139	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	99	84	114	7.50	15.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	89	75	103	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	13.3	10.5	16.1	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	17.4	13.8	21.0	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.807	1.23	0.11	0.21	
	µmol/l	16.0	12.6	19.4	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.936	0.737	1.14	0.10	0.20	
	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		



## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	25.8	20.3	31.3	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.51	1.19	1.83	0.16	0.32	
	µmol/l	25.4	20.0	30.8	2.70	5.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.49	1.17	1.81	0.16	0.32	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazonium ion
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
	mmol/l	2.23	2.01	2.45	0.11	0.22	NM-BAPTA
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	97.9	90.1	106	3.90	7.80	ISE indirect
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	193	158	228	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	121	99	143	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	141	112	170	14.50	29.00	Alkaline picrate no deproteinization
	mg/dl	1.59	1.27	1.91	0.16	0.32	
	µmol/l	143	114	172	14.50	29.00	Roche Creatinine Plus
	mg/dl	1.62	1.29	1.95	0.17	0.33	
	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	139	111	167	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
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

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	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	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	55.2	47.1	63.3	4.05	8.10	
Iron	µmol/l	19.3	15.8	22.8	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.3	128	9.85	19.70	
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	381	323	439	29.00	58.00	P->L German methods 37°C
	U/l	275	233	317	21.00	42.00	P->L German methods 30°C
	U/l	193	164	222	14.50	29.00	P->L German methods 25°C
	U/l	201	171	231	15.00	30.00	L->P IFCC 37°C
	U/l	145	123	167	11.00	22.00	L->P IFCC 30°C
	U/l	102	87	117	7.50	15.00	L->P IFCC 25°C
Lipase	U/l	29	24	34	2.50	5.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.92	2.46	0.14	0.27	

## Roche Cobas C311®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
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	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate enzymatic
	mg/dl	4.46	3.78	5.14	0.34	0.68	
	mmol/l	1.48	1.26	1.70	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.59	3.91	5.27	0.34	0.68	
Potassium	mmol/l	4.28	3.94	4.62	0.17	0.34	ISE method - indirect
Protein Total	g/l	59.9	47.9	71.9	6.00	12.00	Biuret reaction end point
	g/dl	5.99	4.79	7.19	0.60	1.20	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.8	32.3	49.3	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	228	181	275	23.50	47.00	
Triglycerides	mmol/l	1.15	0.97	1.34	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	102	85.4	119	8.30	16.60	
	mmol/l	1.17	0.98	1.36	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	86.8	121	8.60	17.20	
UIBC	µmol/l	21.3	17.4	25.2	1.95	3.90	Direct Colorimetric
	µg/dl	119	97.3	141	10.85	21.70	
Urea	mmol/l	7.38	6.27	8.49	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.38	6.27	8.49	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	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	5.85	5.07	6.63	0.39	0.78	

**Roche Cobas C311®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.7	37.2	50.2	3.25	6.50	Bromocresol Green
	g/dl	4.37	3.72	5.02	0.33	0.65	
	g/l	43.6	37.1	50.1	3.25	6.50	Bromocresol Purple
	g/dl	4.36	3.71	5.01	0.33	0.65	
	g/l	45.2	38.4	52.0	3.40	6.80	Turbidimetric Assays
	g/dl	4.52	3.84	5.20	0.34	0.68	
Alkaline Phosphatase	U/l	148	126	170	11.00	22.00	Roche Integra AMP buffer 37°C
	U/l	115	98	132	8.50	17.00	Roche Integra AMP buffer 30°C
	U/l	95	81	109	7.00	14.00	Roche Integra AMP buffer 25°C
	U/l	150	127	173	11.50	23.00	AMP optimised to IFCC 37°C
	U/l	117	99	135	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	96	81	111	7.50	15.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bicarbonate	mmol/l	13.8	11.0	16.6	1.40	2.80	Enzymatic
Bile Acids	µmol/l	24.0	19.2	28.8	2.40	4.80	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	16.8	13.2	20.4	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.983	0.772	1.19	0.11	0.21	
	µmol/l	16.7	13.2	20.2	1.75	3.50	Roche JG factored
	mg/dl	0.977	0.772	1.18	0.10	0.21	
	µmol/l	14.7	11.6	17.8	1.55	3.10	Oxidation to Biliverdin/Vanadate
Bilirubin Total	mg/dl	0.860	0.679	1.04	0.09	0.18	
	µmol/l	25.5	20.1	30.9	2.70	5.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	23.8	18.8	28.8	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.39	1.10	1.68	0.15	0.29	
	µmol/l	24.5	19.3	29.7	2.60	5.20	Dichlorophenyl Diazonium (DPD)
Calcium	mg/dl	1.43	1.13	1.73	0.15	0.30	
	µmol/l	24.7	19.5	29.9	2.60	5.20	Diazonium ion
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	mmol/l	2.24	2.02	2.46	0.11	0.22	Cresolphthalein complexone
Chloride	mg/dl	8.98	8.10	9.86	0.44	0.88	
	mmol/l	2.22	1.99	2.45	0.12	0.23	NM-BAPTA
Cholesterol	mg/dl	8.90	7.98	9.82	0.46	0.92	
	mmol/l	3.90	3.39	4.41	0.26	0.51	Cholesterol Oxidase
Cholinesterase	mg/dl	151	131	171	10.00	20.00	
	U/l	5397	4318	6476	539.50	1079.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	189	155	223	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	118	97	139	10.50	21.00	CK-NAC (IFCC) 30°C
	U/l	80	66	94	7.00	14.00	CK-NAC (IFCC) 25°C

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	143	115	171	14.00	28.00	Roche Creatinine Plus
	mg/dl	1.62	1.30	1.94	0.16	0.32	
	µmol/l	139	111	167	14.00	28.00	Jaffe rate blanked
	mg/dl	1.57	1.25	1.89	0.16	0.32	
	µmol/l	139	111	167	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.57	1.25	1.89	0.16	0.32	
gamma-GT	U/l	44	37	51	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	29	41	3.00	6.00	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	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	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
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	1.42	1.21	1.63	0.11	0.21	Direct HDL Roche 4th Generation
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.55	1.27	1.83	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.0	11.4	16.6	1.30	2.60	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
	U/l	144	122	166	11.00	22.00	L->P IFCC 30°C
	U/l	101	86	116	7.50	15.00	L->P IFCC 25°C

## Roche Cobas c701 / c702 / c711

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.04	0.92	1.16	0.06	0.12	Spectrophotometric
	mg/dl	0.722	0.637	0.807	0.04	0.09	
Magnesium	mmol/l	0.90	0.79	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.93	0.82	1.04	0.06	0.11	Chlorphosphonazo III
	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	
Potassium	mmol/l	4.27	3.93	4.61	0.17	0.34	ISE method - indirect
Protein Total	g/l	59.2	47.4	71.0	5.90	11.80	Biuret reaction end point
	g/dl	5.92	4.74	7.10	0.59	1.18	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	μmol/l	40.4	31.9	48.9	4.25	8.50	FE+UIBC(saturation with iron)
	μg/dl	226	178	274	24.00	48.00	
	μmol/l	45.1	35.7	54.5	4.70	9.40	Calculated from Transferrin
	μg/dl	252	200	304	26.00	52.00	
Triglycerides	mmol/l	1.12	0.95	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.6	115	7.75	15.50	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	85.0	117	8.00	16.00	
UIBC	μmol/l	22.3	18.3	26.3	2.00	4.00	Direct Colorimetric
	μg/dl	125	102	148	11.50	23.00	
Urea	mmol/l	7.05	5.99	8.11	0.53	1.06	Urease kinetic
	mg/dl	42.4	36.0	48.8	3.20	6.40	





## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.05	5.99	8.11	0.53	1.06	BUN
	mg/dl	19.8	16.8	22.8	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with 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 no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.92	6.36	0.36	0.72	

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.4	36.0	48.8	3.20	6.40	Bromocresol Green
	g/dl	4.24	3.60	4.88	0.32	0.64	
Alkaline Phosphatase	U/l	303	257	349	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	78	66	90	6.00	12.00	Radox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	97	83	111	7.00	14.00	Radox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bile Acids	µmol/l	25.1	20.1	30.1	2.50	5.00	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Diazo with Sulphanilic Acid
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	16.1	12.7	19.5	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.942	0.743	1.14	0.10	0.20	
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	
	µmol/l	29.7	23.5	35.9	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.74	1.37	2.11	0.19	0.37	
Calcium	mmol/l	2.31	2.08	2.54	0.12	0.23	Arsenazo III
	mg/dl	9.26	8.34	10.2	0.46	0.92	
Chloride	mmol/l	97.8	89.9	106	3.95	7.90	ISE direct

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.26	3.71	4.81	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	143	185	10.50	21.00	
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	225	185	265	20.00	40.00	
Creatinine	µmol/l	140	112	168	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.58	1.27	1.89	0.16	0.31	
	µmol/l	143	114	172	14.50	29.00	Enzymatic UV method
	mg/dl	1.62	1.29	1.95	0.17	0.33	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.54	5.56	7.52	0.49	0.98	Hexokinase
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose oxidase
	mg/dl	114	96.8	131	8.60	17.20	
Iron	µmol/l	20.1	16.5	23.7	1.80	3.60	Colorimetric without ppt.
	µg/dl	112	92.2	132	9.90	19.80	
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LD (LDH)	U/l	403	343	463	30.00	60.00	P->L German methods 37°C
	U/l	189	161	217	14.00	28.00	
Lipase	U/l	43	34	52	4.50	9.00	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	0.94	0.83	1.06	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.01	2.57	0.14	0.28	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	

## RX SERIES®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	4.18	3.85	4.51	0.17	0.33	Enzymatic
	mmol/l	4.23	3.89	4.57	0.17	0.34	ISE method - direct
Protein Total	g/l	60.6	48.5	72.7	6.05	12.10	Biuret reaction end point
	g/dl	6.06	4.85	7.27	0.61	1.21	
Sodium	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
TIBC	µmol/l	49.1	38.8	59.4	5.15	10.30	Direct Colorimetric
	µg/dl	274	217	331	28.50	57.00	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.9	117	8.05	16.10	
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	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.08	5.29	6.87	0.40	0.79	

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

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.0	34.9	47.1	3.05	6.10	Bromocresol Green
	g/dl	4.10	3.49	4.71	0.31	0.61	
	g/l	43.1	36.6	49.6	3.25	6.50	Bromocresol Purple
	g/dl	4.31	3.66	4.96	0.33	0.65	
Alkaline Phosphatase	U/l	167	142	192	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Enzymatic
Bile Acids	µmol/l	25.5	20.4	30.6	2.55	5.10	Enzymatic Colorimetric
Bilirubin Direct	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	29.3	23.1	35.5	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	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	102	93.7	110	4.15	8.30	ISE indirect
Cholesterol	mmol/l	3.97	3.46	4.48	0.26	0.51	Cholesterol Oxidase
	mg/dl	153	134	172	9.50	19.00	

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

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	6094	4875	7313	609.50	1219.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked
	mg/dl	1.50	1.21	1.79	0.15	0.29	
Creatinine	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.50	1.20	1.80	0.15	0.30	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.92	5.04	6.80	0.44	0.88	Hexokinase
	mg/dl	107	90.8	123	8.10	16.20	
	mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose oxidase
	mg/dl	108	91.9	124	8.05	16.10	
HDL - Cholesterol	mmol/l	1.09	0.92	1.26	0.08	0.17	Direct Clearance Method
	mg/dl	42.1	35.6	48.6	3.25	6.50	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
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	378	321	435	28.50	57.00	P->L German methods 37°C
	U/l	201	171	231	15.00	30.00	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	
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.91	2.41	0.13	0.25	

SIEMENS ATELLICA / ADVIA 1200/1650/1800/2400			ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)				
Lot. No. 1376UN Cat. No. HN1530 / HS2611							
Size: 20 x 5 ml / 5 x 5 ml		Expiry: 2023-01-28		Range			
Analyte	unit	Target	low	high	1SD	2SD	methods
Phosphate Inorganic	mmol/l	1.49	1.27	1.71	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.62	3.94	5.30	0.34	0.68	
Potassium	mmol/l	4.22	3.88	4.56	0.17	0.34	ISE method - indirect
Protein Total	g/l	57.2	45.8	68.6	5.70	11.40	Biuret reaction end point
	g/dl	5.72	4.58	6.86	0.57	1.14	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	μmol/l	44.4	35.1	53.7	4.65	9.30	FE+UIBC(saturation with iron)
	μg/dl	248	196	300	26.00	52.00	
	μmol/l	46.9	37.0	56.8	4.95	9.90	Direct Colorimetric
	μg/dl	262	207	317	27.50	55.00	
	μmol/l	43.4	34.3	52.5	4.55	9.10	Calculated from Transferrin
	μg/dl	243	192	294	25.50	51.00	
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.6	120	8.20	16.40	
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	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.90	5.14	6.66	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	

## SIEMENS DIMENSION EXL®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.6	37.0	50.2	3.30	6.60	Bromocresol Purple
	g/dl	4.36	3.70	5.02	0.33	0.66	
Alkaline Phosphatase	U/l	169	143	195	13.00	26.00	Siemens Dimension AMP buffer 37°C
	U/l	172	146	198	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer with P5P 37°C
	U/l	43	35	51	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	99	84	114	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	52	41	63	5.50	11.00	Tris buffer with P5P 37°C
	U/l	52	41	63	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	14.3	11.3	17.3	1.50	3.00	Enzymatic
Bilirubin Total	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.26	1.92	0.17	0.33	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	99.7	91.7	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.64	3.17	4.11	0.24	0.47	Cholesterol Oxidase
	mg/dl	141	122	160	9.50	19.00	
	mmol/l	3.63	3.16	4.10	0.24	0.47	Dimension-Siemens reagents
	mg/dl	140	122	158	9.00	18.00	
CK Total	U/l	184	151	217	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	141	113	169	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.59	1.28	1.90	0.16	0.31	



## SIEMENS DIMENSION EXL®

## ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	139	111	167	14.00	28.00	Enzymatic UV method
	mg/dl	1.57	1.25	1.89	0.16	0.32	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	62	52	72	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.16	5.23	7.09	0.47	0.93	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL PEGME
	mg/dl	46.3	39.4	53.2	3.45	6.90	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	
LD (LDH)	U/l	192	163	221	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	129	104	154	12.50	25.00	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	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	4.18	3.84	4.52	0.17	0.34	ISE method - indirect
Protein Total	g/l	61.1	48.9	73.3	6.10	12.20	Biuret reaction end point
	g/dl	6.11	4.89	7.33	0.61	1.22	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µmol/l	38.1	30.1	46.1	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	213	168	258	22.50	45.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.60	15.20	

**SIEMENS DIMENSION EXL®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
Urea	mmol/l	7.40	6.29	8.51	0.56	1.11	Urease kinetic
	mg/dl	44.5	37.8	51.2	3.35	6.70	
	mmol/l	7.40	6.29	8.51	0.56	1.11	BUN
	mg/dl	20.8	17.7	23.9	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	

**SIEMENS DIMENSION RxL/Max/Xpand®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.9	36.5	49.3	3.20	6.40	Bromocresol Purple
	g/dl	4.29	3.65	4.93	0.32	0.64	
Alkaline Phosphatase	U/l	170	144	196	13.00	26.00	Siemens Dimension AMP buffer 37°C
	U/l	174	148	200	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	44	36	52	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	99	85	113	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	49	40	58	4.50	9.00	Tris buffer with P5P 37°C
	U/l	53	42	64	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
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	2.21	1.99	2.43	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Chloride	mmol/l	99.5	91.5	108	4.00	8.00	ISE indirect
Cholesterol	mmol/l	3.69	3.21	4.17	0.24	0.48	Dimension-Siemens reagents
	mg/dl	142	124	160	9.00	18.00	
CK Total	U/l	187	154	220	16.50	33.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	142	114	170	14.00	28.00	Alkaline picrate no deproteinization
	mg/dl	1.60	1.29	1.91	0.16	0.31	
	µmol/l	142	114	170	14.00	28.00	Enzymatic UV method
	mg/dl	1.60	1.29	1.91	0.16	0.31	

**SIEMENS DIMENSION RxL/Max/Xpand®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	57	49	65	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	64	55	73	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	
HDL - Cholesterol	mmol/l	1.27	1.08	1.46	0.10	0.19	Direct HDL PPD
	mg/dl	49.0	41.7	56.3	3.65	7.30	
	mmol/l	1.21	1.03	1.39	0.09	0.18	Direct HDL PEGME
	mg/dl	46.7	39.8	53.6	3.45	6.90	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
LD (LDH)	U/l	194	165	223	14.50	29.00	L->P IFCC 37°C
Magnesium	mmol/l	0.86	0.76	0.97	0.05	0.10	Methylthymol blue
	mg/dl	2.10	1.85	2.35	0.13	0.25	
Phosphate Inorganic	mmol/l	1.54	1.31	1.77	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.77	4.06	5.48	0.36	0.71	
	mmol/l	1.53	1.30	1.76	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.74	4.03	5.45	0.36	0.71	
Potassium	mmol/l	4.14	3.81	4.47	0.17	0.33	ISE method - indirect
Protein Total	g/l	60.7	48.6	72.8	6.05	12.10	Biuret reaction end point
	g/dl	6.07	4.86	7.28	0.61	1.21	
Sodium	mmol/l	143	135	151	4.00	8.00	ISE method - indirect
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	
	mmol/l	1.11	0.94	1.28	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.8	114	7.70	15.40	

**SIEMENS DIMENSION RxL/Max/Xpand®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1376UN Cat. No. HN1530 / HS2611

Size: 20 x 5 ml / 5 x 5 ml Expiry: 2023-01-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.45	6.34	8.56	0.56	1.11	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.45	6.33	8.57	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.88	5.11	6.65	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.86	5.11	6.61	0.38	0.75	