

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

CAT. NO.	HNI1530	GTIN:	05055273203783	SIZE	20 x 5ml
CAT. NO.	HS2611	GTIN:	05055273203813	SIZE	5 x 5ml
LOT NO.	1759UN	EXPIRY:	2028-12-28		

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.

GLDH is stable for 2 days at +2°C to +8°C.

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

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

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

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

The control should not be used as a calibration material.

Due to the zinc content in some batches of rubber stoppers, the QC and calibrator material should be aliquoted into polypropylene tubes and stored at +2°C to +8°C to ensure stable zinc levels throughout the stability period.

PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

- 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

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

Each batch of Assayed Human Serum Control is assigned at Randox Laboratories and a number of external laboratories. Values are assigned from a consensus of results obtained by these laboratories.

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

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

NOTES

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

EC	REP
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Abbott Alinity Alinity c				Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28								
Size: 20 x 5 ml		Range						
Analyte	Unit	Target	Low	High	1SD	2SD	Method	
Albumin	g/dl	3.87	3.29	4.45	0.290	0.580	Abbott Alinity Albumin BCG 2	
	g/l	38.7	32.9	44.5	2.90	5.80		
	g/dl	3.74	3.18	4.30	0.280	0.560	Abbott Alinity Albumin BCP 2	
	g/l	37.4	31.8	43.0	2.80	5.60		
	g/dl	3.86	3.28	4.44	0.290	0.580	Bromocresol Green	
	g/l	38.6	32.8	44.4	2.90	5.80		
Alkaline Phosphatase	U/l	200	170	230	15.0	30.0	Abbott Alinity Alkaline Phosphatase 2	
	U/l	191	162	220	14.5	29.0	AMP non-optimised	
	U/l	205	174	236	15.5	31.0	AMP optimised to IFCC	
ALT (GPT)	U/l	36	29	43	3.50	7.00	Abbott Alinity ALT 2	
	U/l	42	34	50	4.00	8.00	Tris Buffer With P5P	
	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P	
Amylase Pancreatic	U/l	54	46	62	4.00	8.00	Amyloclastic Methods	
	U/l	55	47	63	4.00	8.00	Immunoinhibition - EPS substrate	
Amylase Total	U/l	83	71	95	6.00	12.0	Abbott Alinity Amylase 2	
AST (GOT)	U/l	36	29	43	3.50	7.00	Abbott Alinity AST 2	
	U/l	52	42	62	5.00	10.0	Tris Buffer With P5P	
	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P	
Bicarbonate	mmol/l	12.6	9.99	15.2	1.30	2.60	Enzymatic	
	mmol/l	12.1	9.60	14.6	1.25	2.50	PEP Carboxylase	
Bile Acids	µmol/l	23.6	18.9	28.3	2.35	4.70	Enzymatic Colorimetric	
Bilirubin Direct	mg/dl	1.02	0.806	1.23	0.105	0.210	Diazo with Dichloroaniline	
	µmol/l	17.5	13.8	21.2	1.85	3.70		
	mg/dl	1.05	0.830	1.27	0.110	0.220	Diazo With Sulphanilic Acid	
	µmol/l	17.9	14.1	21.7	1.90	3.80		
Bilirubin Total	mg/dl	1.43	1.13	1.73	0.150	0.300	Abbott Alin/Arch cal batch no >97447/8/9	
	µmol/l	24.4	19.3	29.5	2.55	5.10		
	mg/dl	1.49	1.18	1.80	0.155	0.310	Abbott Alinity Total Bilirubin 2	
	µmol/l	25.4	20.1	30.7	2.65	5.30		
	mg/dl	1.42	1.12	1.72	0.150	0.300	Diazo With Dichloroaniline	
	µmol/l	24.3	19.2	29.4	2.55	5.10		
	mg/dl	1.44	1.14	1.74	0.150	0.300	Diazo With Sulphanilic Acid	
	µmol/l	24.7	19.5	29.9	2.60	5.20		
	mg/dl	1.43	1.13	1.73	0.150	0.300	Diazonium Ion	
	µmol/l	24.4	19.3	29.5	2.55	5.10		
	Calcium	mg/dl	8.34	7.51	9.17	0.415	0.830	Arsenazo III
		mmol/l	2.08	1.87	2.29	0.105	0.210	
Chloride	mmol/l	99.8	91.8	108	4.10	8.20	ISE Indirect	

Abbott Alinity Alinity c				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Cholesterol	mg/dl	156	136	176	10.0	20.0	Abbott Alinity Cholesterol 2
	mmol/l	4.04	3.51	4.57	0.265	0.530	
	mg/dl	158	137	179	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.10	3.57	4.63	0.265	0.530	
Cholinesterase	U/l	6917	5534	8300	692	1383	Colorimetric - Butyrylthiocholine
CK Total	U/l	199	163	235	18.0	36.0	Abbott CK-NAC (IFCC)
	U/l	199	163	235	18.0	36.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.36	1.09	1.63	0.135	0.270	Abbott Alinity Creatinine 2
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.34	1.07	1.61	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	119	95.2	143	12.0	24.0	
	mg/dl	1.33	1.06	1.60	0.135	0.270	Enzymatic
	µmol/l	118	94.4	142	12.0	24.0	
gamma-GT	U/l	52	44	60	4.00	8.00	Abbott Alinity GGT 2
	U/l	51	43	59	4.00	8.00	Gamma glut.-3-carb.-4-nitro.
	U/l	55	47	63	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	104	88.4	120	8.00	16.0	Hexokinase
	mmol/l	5.77	4.90	6.64	0.435	0.870	
HDL - Cholesterol	mg/dl	50.6	43.0	58.2	3.80	7.60	Direct HDL - Clearance method
	mmol/l	1.31	1.11	1.51	0.100	0.200	
	mg/dl	51.4	43.7	59.1	3.85	7.70	Direct HDL - PPD
	mmol/l	1.33	1.13	1.53	0.100	0.200	
	mg/dl	51.4	43.7	59.1	3.85	7.70	HDL Ultra/Accel Selective Detergent
	mmol/l	1.33	1.13	1.53	0.100	0.200	
Iron	µg/dl	113	92.7	133	10.0	20.0	Abbott Alinity Iron 2
	µmol/l	20.2	16.6	23.8	1.80	3.60	
	µg/dl	113	92.7	133	10.0	20.0	Colorimetric without ppt.
	µmol/l	20.2	16.6	23.8	1.80	3.60	
Lactate	mg/dl	14.3	11.7	16.9	1.30	2.60	Colorimetric - Lactate oxidase
	mmol/l	1.59	1.30	1.88	0.145	0.290	
LD (LDH)	U/l	196	167	225	14.5	29.0	Abbott Alinity LD 2
	U/l	195	166	224	14.5	29.0	L to P - IFCC
Lithium	mg/dl	0.663	0.583	0.743	0.040	0.080	Spectrophotometric
	mmol/l	0.955	0.840	1.07	0.058	0.115	
Magnesium	mg/dl	2.13	1.87	2.39	0.130	0.260	Arsenazo III
	mmol/l	0.878	0.773	0.983	0.053	0.105	
	mg/dl	2.11	1.86	2.36	0.125	0.250	Enzymatic
	mmol/l	0.868	0.764	0.972	0.052	0.104	

Abbott Alinity Alinity c				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Phosphate Inorganic	mg/dl	4.40	3.74	5.06	0.330	0.660	Phosphomolybdate Enzymatic
	mmol/l	1.42	1.21	1.63	0.105	0.210	
	mg/dl	4.46	3.79	5.13	0.335	0.670	Phosphomolybdate UV
	mmol/l	1.44	1.22	1.66	0.110	0.220	
Potassium	mmol/l	4.07	3.74	4.40	0.165	0.330	ISE method - indirect
Protein Total	g/dl	5.69	4.55	6.83	0.570	1.14	Abbott Alinity Total Protein 2
	g/l	56.9	45.5	68.3	5.70	11.4	
	g/dl	5.71	4.57	6.85	0.570	1.14	Biuret reaction - end point
	g/l	57.1	45.7	68.5	5.70	11.4	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µg/dl	224	177	271	23.5	47.0	FE+UIBC(saturation with iron)
	µmol/l	40.0	31.6	48.4	4.20	8.40	
Triglycerides	mg/dl	93.8	78.8	109	7.60	15.2	Abbott Alinity i
	mmol/l	1.06	0.890	1.23	0.085	0.170	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	46.8	39.8	53.8	3.50	7.00	Abbott Architect Urea Nitrogen 2
	mg/dl (BUN)	21.8	18.5	25.1	1.65	3.30	
	mmol/l	7.79	6.62	8.96	0.585	1.17	
	mg/dl	44.5	37.8	51.2	3.35	6.70	Urease - kinetic
	mg/dl (BUN)	20.8	17.7	23.9	1.55	3.10	
	mmol/l	7.41	6.30	8.52	0.555	1.11	
Uric Acid (Urate)	mg/dl	5.63	4.90	6.36	0.365	0.730	Abbott Alinity Uric Acid 2
	mmol/l	0.335	0.291	0.379	0.022	0.044	
	µmol/l	335	291	379	22.0	44.0	
	mg/dl	5.48	4.77	6.19	0.355	0.710	Uricase perox. no ascorb. ox.
	mmol/l	0.326	0.284	0.368	0.021	0.042	
	µmol/l	326	284	368	21.0	42.0	
	mg/dl	5.70	4.96	6.44	0.370	0.740	Uricase Perox. with ascorb. ox
	mmol/l	0.339	0.295	0.383	0.022	0.044	
µmol/l	339	295	383	22.0	44.0		

Abbott Alinity Alinity i				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.09	0.818	1.36	0.135	0.270	Abbott Architect
	pg/ml	10.9	8.18	13.6	1.35	2.70	
	pmol/l	14.0	10.5	17.5	1.75	3.50	
PSA Total	ng/ml = µg/l	8.37	6.28	10.5	1.07	2.13	Abbott Architect/ Alinity
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.07	0.856	1.28	0.105	0.210	Abbott Architect

Abbott Architect c Systems				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.85	3.27	4.43	0.290	0.580	Abbott Architect Albumin BCG 2
	g/l	38.5	32.7	44.3	2.90	5.80	
	g/dl	3.85	3.27	4.43	0.290	0.580	Abbott Architect Albumin BCP 2
	g/l	38.5	32.7	44.3	2.90	5.80	
	g/dl	3.89	3.31	4.47	0.290	0.580	Bromocresol Green
	g/l	38.9	33.1	44.7	2.90	5.80	
Alkaline Phosphatase	U/l	200	170	230	15.0	30.0	Abbott Architect Alkaline Phosphatase 2
	U/l	195	166	224	14.5	29.0	AMP non-optimised
	U/l	195	166	224	14.5	29.0	AMP optimised to IFCC
ALT (GPT)	U/l	38	30	46	4.00	8.00	Abbott Architect ALT 2
	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	58	49	67	4.50	9.00	Immunoinhibition - EPS substrate
Amylase Total	U/l	84	71	97	6.50	13.0	Abbott Architect Amylase 2
AST (GOT)	U/l	36	29	43	3.50	7.00	Abbott Architect AST 2
	U/l	51	41	61	5.00	10.0	Tris Buffer With P5P
	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	10.9	8.64	13.2	1.15	2.30	Enzymatic
	mmol/l	11.3	8.96	13.6	1.15	2.30	PEP Carboxylase
Bile Acids	µmol/l	25.2	20.2	30.2	2.50	5.00	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.08	0.853	1.31	0.115	0.230	Diazo with Dichloroaniline
	µmol/l	18.5	14.6	22.4	1.95	3.90	
	mg/dl	1.01	0.798	1.22	0.105	0.210	Diazo With Sulphanilic Acid
	µmol/l	17.3	13.7	20.9	1.80	3.60	
Bilirubin Total	mg/dl	1.52	1.20	1.84	0.160	0.320	Abbott Alin/Arch cal batch no >97447/8/9
	µmol/l	25.9	20.5	31.3	2.70	5.40	
	mg/dl	1.50	1.19	1.81	0.155	0.310	Abbott Architect Total Bilirubin 2
	µmol/l	25.7	20.3	31.1	2.70	5.40	
	mg/dl	1.42	1.12	1.72	0.150	0.300	Diazo With Dichloroaniline
	µmol/l	24.3	19.2	29.4	2.55	5.10	
	mg/dl	1.52	1.20	1.84	0.160	0.320	Diazo With Sulphanilic Acid
	µmol/l	25.9	20.5	31.3	2.70	5.40	
Calcium	mg/dl	8.38	7.54	9.22	0.420	0.840	Arsenazo III
	mmol/l	2.09	1.88	2.30	0.105	0.210	
Chloride	mmol/l	99.9	91.9	108	4.05	8.10	ISE Indirect
Cholesterol	mg/dl	157	137	177	10.0	20.0	Abbott Architect Cholesterol 2
	mmol/l	4.06	3.53	4.59	0.265	0.530	

Abbott Architect c Systems				Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28								
Size: 20 x 5 ml		Range						
Analyte	Unit	Target	Low	High	1SD	2SD	Method	
Cholesterol	mg/dl	158	137	179	10.5	21.0	Cholesterol Oxidase - Abell Kendall	
	mmol/l	4.10	3.57	4.63	0.265	0.530		
Cholinesterase	U/l	6914	5531	8297	692	1383	Colorimetric - Butyrylthiocholine	
CK Total	U/l	193	158	228	17.5	35.0	CK-NAC (IFCC)	
Creatinine	mg/dl	1.34	1.07	1.61	0.135	0.270	Abbott Architect Creatinine 2	
	µmol/l	119	95.2	143	12.0	24.0		
	mg/dl	1.34	1.07	1.61	0.135	0.270	Alkaline picrate no deproteinisation	
	µmol/l	119	95.2	143	12.0	24.0		
	mg/dl	1.34	1.07	1.61	0.135	0.270	Enzymatic	
	µmol/l	119	95.2	143	12.0	24.0		
	gamma-GT	U/l	52	44	60	4.00	8.00	Abbott Architect GGT 2
		U/l	50	43	57	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
U/l		52	44	60	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)	
Glucose	mg/dl	105	89.3	121	8.00	16.0	Hexokinase	
	mmol/l	5.82	4.95	6.69	0.435	0.870		
HDL - Cholesterol	mg/dl	52.5	44.6	60.4	3.95	7.90	Direct HDL - PPD	
	mmol/l	1.36	1.16	1.56	0.100	0.200		
	mg/dl	51.4	43.7	59.1	3.85	7.70	HDL Ultra/Accel Selective Detergent	
	mmol/l	1.33	1.13	1.53	0.100	0.200		
Iron	µg/dl	115	94.3	136	10.5	21.0	Abbott Architect Chemilum	
	µmol/l	20.6	16.9	24.3	1.85	3.70		
	µg/dl	115	94.3	136	10.5	21.0	Colorimetric without ppt.	
	µmol/l	20.6	16.9	24.3	1.85	3.70		
Lactate	mg/dl	14.6	12.0	17.2	1.30	2.60	Colorimetric - Lactate oxidase	
	mmol/l	1.62	1.33	1.91	0.145	0.290		
LD (LDH)	U/l	197	167	227	15.0	30.0	Abbott Architect LD 2	
	U/l	195	166	224	14.5	29.0	L to P - IFCC	
Lipase	U/l	38	30	46	4.00	8.00	Other Colorimetric	
Lithium	mg/dl	0.680	0.598	0.762	0.041	0.082	Spectrophotometric	
	mmol/l	0.979	0.862	1.10	0.061	0.121		
Magnesium	mg/dl	2.11	1.86	2.36	0.125	0.250	Enzymatic	
	mmol/l	0.868	0.764	0.972	0.052	0.104		
Osmolality	mOsm/ Kg	303	242	364	30.5	61.0	Calculated	
Phosphate Inorganic	mg/dl	4.53	3.85	5.21	0.340	0.680	Phosphomolybdate Enzymatic	
	mmol/l	1.46	1.24	1.68	0.110	0.220		
	mg/dl	4.49	3.82	5.16	0.335	0.670	Phosphomolybdate UV	
	mmol/l	1.45	1.23	1.67	0.110	0.220		
Potassium	mmol/l	4.09	3.76	4.42	0.165	0.330	ISE method - indirect	

Abbott Architect c Systems				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Protein Total	g/dl	5.90	4.72	7.08	0.590	1.18	Abbott Architect total Protein 2
	g/l	59.0	47.2	70.8	5.90	11.8	
	g/dl	5.88	4.70	7.06	0.590	1.18	Biuret reaction - end point
	g/l	58.8	47.0	70.6	5.90	11.8	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µg/dl	260	205	315	27.5	55.0	Calculated from Transferrin
	µmol/l	46.5	36.7	56.3	4.90	9.80	
	µg/dl	235	186	284	24.5	49.0	FE+UIBC(saturation with iron)
	µmol/l	42.1	33.3	50.9	4.40	8.80	
Triglycerides	mg/dl	93.8	78.8	109	7.60	15.2	Abbott Architect Triglyceride 2
	mmol/l	1.06	0.890	1.23	0.085	0.170	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	47.8	40.6	55.0	3.60	7.20	Abbott Architect Urea Nitrogen 2
	mg/dl (BUN)	22.3	19.0	25.6	1.65	3.30	
	mmol/l	7.95	6.76	9.14	0.595	1.19	
	mg/dl	47.7	40.5	54.9	3.60	7.20	Urease - kinetic
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.94	6.75	9.13	0.595	1.19	
Uric Acid (Urate)	mg/dl	5.65	4.92	6.38	0.365	0.730	Abbott Architect Uric Acid 2
	mmol/l	0.336	0.292	0.380	0.022	0.044	
	µmol/l	336	292	380	22.0	44.0	
	mg/dl	5.65	4.92	6.38	0.365	0.730	Uricase perox. no ascorb. ox.
	mmol/l	0.336	0.292	0.380	0.022	0.044	
	µmol/l	336	292	380	22.0	44.0	
	mg/dl	5.63	4.90	6.36	0.365	0.730	Uricase Perox. with ascorb. ox
	mmol/l	0.335	0.291	0.379	0.022	0.044	
µmol/l	335	291	379	22.0	44.0		

Abbott Architect i Systems				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.10	0.825	1.38	0.140	0.280	Abbott Architect
	pg/ml	11.0	8.25	13.8	1.40	2.80	
	pmol/l	14.1	10.6	17.6	1.75	3.50	
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.14	0.912	1.37	0.115	0.230	Abbott Architect

Arkray Spotchem D-Concept				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.40	3.74	5.06	0.330	0.660	Arkray Spotchem D-Concept
	g/l	44.0	37.4	50.6	3.30	6.60	
Alkaline Phosphatase	U/l	577	490	664	43.5	87.0	Arkray Spotchem D-Concept
ALT (GPT)	U/l	29	23	35	3.00	6.00	Arkray Spotchem D-Concept
Amylase Total	U/l	100	85	115	7.50	15.0	Arkray Spotchem D-Concept
	U/l	94	80	108	7.00	14.0	Arkray Spotchem D-Concept Amy2
AST (GOT)	U/l	24	19	29	2.50	5.00	Arkray Spotchem D-Concept
Bilirubin Total	mg/dl	1.50	1.19	1.81	0.155	0.310	Arkray Spotchem D-Concept
	µmol/l	25.7	20.3	31.1	2.70	5.40	
Calcium	mg/dl	8.10	7.29	8.91	0.405	0.810	Arkray Spotchem D-Concept
	mmol/l	2.02	1.82	2.22	0.100	0.200	
Chloride	mmol/l	104	95.7	112	4.00	8.00	Arkray Spotchem D-Concept
Cholesterol	mg/dl	161	140	182	10.5	21.0	Arkray Spotchem D-Concept
	mmol/l	4.16	3.62	4.70	0.270	0.540	
CK Total	U/l	144	118	170	13.0	26.0	Arkray Spotchem D-Concept
Creatinine	mg/dl	1.10	0.880	1.32	0.110	0.220	Arkray Spotchem D-Concept Crea2
	µmol/l	97.2	77.8	117	9.90	19.8	
gamma-GT	U/l	63	54	72	4.50	9.00	Arkray Spotchem D-Concept
Glucose	mg/dl	102	86.7	117	7.50	15.0	Arkray Spotchem D-Concept
	mmol/l	5.66	4.81	6.51	0.425	0.850	
HDL - Cholesterol	mg/dl	38.0	32.3	43.7	2.85	5.70	Arkray Spotchem D-Concept
	mmol/l	0.983	0.836	1.13	0.074	0.147	
LD (LDH)	U/l	180	153	207	13.5	27.0	Arkray Spotchem D-Concept
Magnesium	mg/dl	2.30	2.02	2.58	0.140	0.280	Arkray Spotchem D-Concept
	mmol/l	0.946	0.832	1.06	0.057	0.114	
Phosphate Inorganic	mg/dl	4.49	3.82	5.16	0.335	0.670	Arkray Spotchem D-Concept
	mmol/l	1.45	1.23	1.67	0.110	0.220	
Potassium	mmol/l	4.00	3.68	4.32	0.160	0.320	Arkray Spotchem D-Concept
Protein Total	g/dl	5.20	4.16	6.24	0.520	1.04	Arkray Spotchem D-Concept
	g/l	52.0	41.6	62.4	5.20	10.4	
Sodium	mmol/l	137	130	144	3.50	7.00	Arkray Spotchem D-Concept
Triglycerides	mg/dl	91.2	76.6	106	7.40	14.8	Arkray Spotchem D-Concept
	mmol/l	1.03	0.865	1.20	0.085	0.170	
Urea	mg/dl	22.0	18.7	25.3	1.65	3.30	Arkray Spotchem D-Concept
	mg/dl (BUN)	10.2	8.67	11.7	0.750	1.50	
	mmol/l	3.66	3.11	4.21	0.275	0.550	

Arkray Spotchem D-Concept				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	5.90	5.13	6.67	0.385	0.770	Arkray Spotchem D-Concept
	mmol/l	0.351	0.305	0.397	0.023	0.046	
	µmol/l	351	305	397	23.0	46.0	

Arkray Spotchem EL				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.10	3.49	4.71	0.305	0.610	Arkray Spotchem EZ/EL
	g/l	41.0	34.9	47.1	3.05	6.10	
Alkaline Phosphatase	U/l	190	162	218	14.0	28.0	Arkray Spotchem EZ/EL
ALT (GPT)	U/l	31	25	37	3.00	6.00	Arkray Spotchem EZ/EL
Amylase Total	U/l	67	57	77	5.00	10.0	Arkray Spotchem EZ/EL
	U/l	94	80	108	7.00	14.0	Arkray Spotchem EZ/EL Amy2
AST (GOT)	U/l	24	19	29	2.50	5.00	Arkray Spotchem EZ/EL
Bilirubin Total	mg/dl	1.30	1.03	1.57	0.135	0.270	Arkray Spotchem EZ/EL
	µmol/l	22.2	17.5	26.9	2.35	4.70	
Calcium	mg/dl	8.82	7.94	9.70	0.440	0.880	Arkray Spotchem EZ/EL
	mmol/l	2.20	1.98	2.42	0.110	0.220	
Chloride	mmol/l	107	98.4	116	4.50	9.00	Arkray Spotchem EZ/EL
Cholesterol	mg/dl	150	131	169	9.50	19.0	Arkray Spotchem EZ/EL
	mmol/l	3.88	3.38	4.38	0.250	0.500	
CK Total	U/l	166	136	196	15.0	30.0	Arkray Spotchem EZ/EL
Creatinine	mg/dl	1.10	0.880	1.32	0.110	0.220	Arkray Spotchem EZ/EL Crea2
	µmol/l	97.2	77.8	117	9.90	19.8	
gamma-GT	U/l	68	58	78	5.00	10.0	Arkray Spotchem EZ/EL
Glucose	mg/dl	105	89.3	121	8.00	16.0	Arkray Spotchem EZ/EL
	mmol/l	5.82	4.95	6.69	0.435	0.870	
HDL - Cholesterol	mg/dl	35.9	30.5	41.3	2.70	5.40	Arkray Spotchem EZ/EL
	mmol/l	0.931	0.791	1.07	0.070	0.139	
LD (LDH)	U/l	306	260	352	23.0	46.0	Arkray Spotchem EZ/EL
Magnesium	mg/dl	2.10	1.85	2.35	0.125	0.250	Arkray Spotchem EZ/EL
	mmol/l	0.864	0.760	0.968	0.052	0.104	
Phosphate Inorganic	mg/dl	4.31	3.66	4.96	0.325	0.650	Arkray Spotchem EZ/EL
	mmol/l	1.39	1.18	1.60	0.105	0.210	
Potassium	mmol/l	4.00	3.68	4.32	0.160	0.320	Arkray Spotchem EZ/EL
Protein Total	g/dl	5.40	4.32	6.48	0.540	1.08	Arkray Spotchem EZ/EL
	g/l	54.0	43.2	64.8	5.40	10.8	
Sodium	mmol/l	138	131	145	3.50	7.00	Arkray Spotchem EZ/EL
Triglycerides	mg/dl	88.0	73.9	102	7.00	14.0	Arkray Spotchem EZ/EL
	mmol/l	0.994	0.835	1.15	0.078	0.156	
Urea	mg/dl	51.5	43.8	59.2	3.85	7.70	Arkray Spotchem EZ/EL
	mg/dl (BUN)	24.0	20.4	27.6	1.80	3.60	
	mmol/l	8.57	7.28	9.86	0.645	1.29	

Arkray Spotchem EL				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	5.19	4.52	5.86	0.335	0.670	Arkray Spotchem EZ/EL
	mmol/l	0.309	0.269	0.349	0.020	0.040	
	µmol/l	309	269	349	20.0	40.0	

Beckman Coulter AU Series				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.78	3.21	4.35	0.285	0.570	Bromocresol Green
	g/l	37.8	32.1	43.5	2.85	5.70	
Alkaline Phosphatase	U/l	210	179	241	15.5	31.0	AMP optimised to IFCC
	U/l	207	176	238	15.5	31.0	Beckman AMP (Calibrator)
	U/l	206	175	237	15.5	31.0	Beckman AMP (Extinction Coeff)
	U/l	277	235	319	21.0	42.0	Diethanolamine buffer - DEA
ALT (GPT)	U/l	40	32	48	4.00	8.00	Beckman (Extinction Coefficient)
	U/l	42	34	50	4.00	8.00	Beckman IFCC Ref. with P5P
	U/l	42	34	50	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
Amylase Total	U/l	85	72	98	6.50	13.0	Beckman blocked pNPG7
	U/l	74	63	85	5.50	11.0	Beckman CNPG3 (Extinction Coeff)
	U/l	78	66	90	6.00	12.0	Beckman CNPG3 (Master Cal)
	U/l	78	66	90	6.00	12.0	Beckman maltotetraose
AST (GOT)	U/l	33	26	40	3.50	7.00	Beckman (Extinction Coefficient)
	U/l	36	29	43	3.50	7.00	Beckman Mod. IFCC Ref. without P5P
Bicarbonate	mmol/l	13.3	10.5	16.1	1.40	2.80	PEP Carboxylase
Bile Acids	µmol/l	24.5	19.6	29.4	2.45	4.90	Enzymatic Colorimetric
	µmol/l	24.8	19.8	29.8	2.50	5.00	Enzymatic Colorimetric - Sentinel
Bilirubin Direct	mg/dl	1.13	0.893	1.37	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.3	15.2	23.4	2.05	4.10	
Bilirubin Total	mg/dl	1.72	1.36	2.08	0.180	0.360	DPD (Beckman AU)
	µmol/l	29.4	23.2	35.6	3.10	6.20	
Calcium	mg/dl	8.62	7.76	9.48	0.430	0.860	Arsenazo III
	mmol/l	2.15	1.94	2.36	0.105	0.210	
Chloride	mmol/l	96.1	88.4	104	3.95	7.90	ISE Indirect
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.04	3.51	4.57	0.265	0.530	
	mg/dl	162	141	183	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.20	3.65	4.75	0.275	0.550	
CK Total	U/l	194	159	229	17.5	35.0	Beckman CK-NAC (Extinction Coeff)
	U/l	204	167	241	18.5	37.0	Beckman CK-NAC (IFCC)
Creatinine	mg/dl	1.34	1.07	1.61	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	119	95.2	143	12.0	24.0	
	mg/dl	1.40	1.12	1.68	0.140	0.280	Enzymatic
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.24	0.992	1.49	0.125	0.250	IDMS Traceable
	µmol/l	110	88.0	132	11.0	22.0	
	mg/dl	1.30	1.04	1.56	0.130	0.260	Jaffe Rate Blanked
	µmol/l	115	92.0	138	11.5	23.0	

Beckman Coulter AU Series				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Creatinine	mg/dl	1.24	0.992	1.49	0.125	0.250	Jaffe rate comp. (-18umol/l)
	µmol/l	110	88.0	132	11.0	22.0	
D-3-Hydroxybutyrate	mmol/l	0.307	0.261	0.353	0.023	0.046	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer
Glucose	mg/dl	101	85.9	116	7.50	15.0	Glucose Oxidase
	mmol/l	5.61	4.77	6.45	0.420	0.840	
	mg/dl	105	89.3	121	8.00	16.0	Hexokinase
	mmol/l	5.81	4.94	6.68	0.435	0.870	
HDL - Cholesterol	mg/dl	48.3	41.1	55.5	3.60	7.20	Direct HDL - Immunoseparation
	mmol/l	1.25	1.06	1.44	0.095	0.190	
	mg/dl	47.9	40.7	55.1	3.60	7.20	Direct HDL - PPD
	mmol/l	1.24	1.05	1.43	0.095	0.190	
	mg/dl	53.7	45.6	61.8	4.05	8.10	HDL Ultra/Accel Selective Detergent
	mmol/l	1.39	1.18	1.60	0.105	0.210	
Iron	µg/dl	113	92.7	133	10.0	20.0	Colorimetric with ppt.
	µmol/l	20.2	16.6	23.8	1.80	3.60	
	µg/dl	111	91.0	131	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.9	16.3	23.5	1.80	3.60	
Lactate	mg/dl	13.2	10.8	15.6	1.20	2.40	Colorimetric - Lactate oxidase
	mmol/l	1.47	1.21	1.73	0.130	0.260	
LD (LDH)	U/l	199	169	229	15.0	30.0	L to P - IFCC
	U/l	426	362	490	32.0	64.0	P to L Scandinavian & Dutch
Lipase	U/l	44	35	53	4.50	9.00	Colorimetric Randox
	U/l	39	31	47	4.00	8.00	Other Colorimetric
Lithium	mg/dl	0.683	0.601	0.765	0.041	0.082	Spectrophotometric
	mmol/l	0.983	0.865	1.10	0.059	0.117	
Magnesium	mg/dl	2.15	1.89	2.41	0.130	0.260	Xylidyl Blue
	mmol/l	0.883	0.777	0.989	0.053	0.106	
Osmolality	mOsm/ Kg	297	238	356	29.5	59.0	Calculated
Phosphate Inorganic	mg/dl	4.49	3.82	5.16	0.335	0.670	Phosphomolybdate UV
	mmol/l	1.45	1.23	1.67	0.110	0.220	
Potassium	mmol/l	4.06	3.74	4.38	0.160	0.320	ISE method - indirect
Protein Total	g/dl	5.55	4.44	6.66	0.555	1.11	Biuret reaction - end point
	g/l	55.5	44.4	66.6	5.55	11.1	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
TIBC	µg/dl	256	202	310	27.0	54.0	Direct Colorimetric
	µmol/l	45.8	36.2	55.4	4.80	9.60	

Beckman Coulter AU Series				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
TIBC	µg/dl	257	203	311	27.0	54.0	FE+UIBC(saturation with iron)
	µmol/l	45.9	36.3	55.5	4.80	9.60	
Triglycerides	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GK UV. no correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
	mg/dl	94.7	79.5	110	7.65	15.3	Lipase/GPO-PAP No Correction
	mmol/l	1.07	0.899	1.24	0.085	0.170	
Urea	mg/dl	45.4	38.6	52.2	3.40	6.80	Urease - end point
	mg/dl (BUN)	21.2	18.0	24.4	1.60	3.20	
	mmol/l	7.56	6.43	8.69	0.565	1.13	
	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease - kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.75	6.59	8.91	0.580	1.16	
Uric Acid (Urate)	mg/dl	5.83	5.07	6.59	0.380	0.760	Beckman AU Non US calibrator (66300)
	mmol/l	0.347	0.302	0.392	0.023	0.045	
	µmol/l	347	302	392	22.5	45.0	
	mg/dl	5.82	5.06	6.58	0.380	0.760	Uricase perox. no ascorb. ox.
	mmol/l	0.346	0.301	0.391	0.023	0.045	
	µmol/l	346	301	391	22.5	45.0	
	mg/dl	5.80	5.05	6.55	0.375	0.750	Uricase Perox. with ascorb. ox
	mmol/l	0.345	0.300	0.390	0.023	0.045	
µmol/l	345	300	390	22.5	45.0		

Hitachi Series			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Chloride	mmol/l	94.0	86.5	102	4.00	8.00	ISE Indirect

Method		Human Assayed Multi-Sera - Level 2					
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.87	3.29	4.45	0.290	0.580	Abbott Alinity Albumin BCG 2
	g/l	38.7	32.9	44.5	2.90	5.80	
	g/dl	3.74	3.18	4.30	0.280	0.560	Abbott Alinity Albumin BCP 2
	g/l	37.4	31.8	43.0	2.80	5.60	
	g/dl	3.86	3.28	4.44	0.290	0.580	Abbott Architect Albumin BCG 2
	g/l	38.6	32.8	44.4	2.90	5.80	
	g/dl	3.94	3.35	4.53	0.295	0.590	Bromocresol Green
	g/l	39.4	33.5	45.3	2.95	5.90	
	g/dl	3.97	3.37	4.57	0.300	0.600	Bromocresol Purple
	g/l	39.7	33.7	45.7	3.00	6.00	
	g/dl	4.01	3.41	4.61	0.300	0.600	Ortho Vitros Microslide Systems
	g/l	40.1	34.1	46.1	3.00	6.00	
Alkaline Phosphatase	g/dl	3.77	3.20	4.34	0.285	0.570	Turbidimetric Assays
	g/l	37.7	32.0	43.4	2.85	5.70	
	U/l	200	170	230	15.0	30.0	Abbott Alinity Alkaline Phosphatase 2
	U/l	200	170	230	15.0	30.0	Abbott Architect Alkaline Phosphatase 2
	U/l	193	164	222	14.5	29.0	AMP non-optimised
	U/l	195	166	224	14.5	29.0	AMP optimised to IFCC
	U/l	207	176	238	15.5	31.0	Beckman AMP (Calibrator)
	U/l	179	152	206	13.5	27.0	Colorimetric
	U/l	271	230	312	20.5	41.0	Diethanolamine buffer - DEA
	U/l	174	148	200	13.0	26.0	Ortho Vitros Microslide Systems
	U/l	176	150	202	13.0	26.0	Roche AMP buffer IFCC
	U/l	187	159	215	14.0	28.0	Siemens/Dade Dimension AMP buffer
ALT (GPT)	U/l	36	29	43	3.50	7.00	Abbott Alinity ALT 2
	U/l	38	30	46	4.00	8.00	Abbott Architect ALT 2
	U/l	42	34	50	4.00	8.00	Beckman Mod. IFCC Ref. without P5P
	U/l	47	38	56	4.50	9.00	Ortho Vitros Microslide Systems
	U/l	46	37	55	4.50	9.00	Ortho Vitros MicroSlide visible
	U/l	42	34	50	4.00	8.00	Tris Buffer With P5P
	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	57	48	66	4.50	9.00	Immunoinhibition - EPS substrate
	U/l	57	48	66	4.50	9.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	83	71	95	6.00	12.0	Abbott Alinity Amylase 2
	U/l	84	71	97	6.50	13.0	Abbott Architect Amylase 2
	U/l	85	72	98	6.50	13.0	Beckman blocked pNPG7
	U/l	78	66	90	6.00	12.0	Beckman CNPG3 (Master Cal)
	U/l	82	70	94	6.00	12.0	BM/Roche - Colorimetric pNPG7
	U/l	65	55	75	5.00	10.0	Ortho Vitros Microslide Systems

Method		Human Assayed Multi-Sera - Level 2					
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Amylase Total	U/l	83	71	95	6.00	12.0	Roche Integra 2-chloro-pNPG7
	U/l	83	71	95	6.00	12.0	Roche Liquid Stable pNPG7
	U/l	92	78	106	7.00	14.0	Siemens - blocked pNPG7
	U/l	87	74	100	6.50	13.0	Siemens/Dade Behring 2-chloro-pNPG3
Apolipoprotein A1	g/l	1.15	0.943	1.36	0.105	0.210	Immunoturbidimetric
	mg/dl	115	94.3	136	10.5	21.0	
Apolipoprotein B	g/l	0.587	0.481	0.693	0.053	0.106	Immunoturbidimetric
	mg/dl	58.7	48.1	69.3	5.30	10.6	
AST (GOT)	U/l	36	29	43	3.50	7.00	Abbott Alinity AST 2
	U/l	36	29	43	3.50	7.00	Abbott Architect AST 2
	U/l	36	29	43	3.50	7.00	Beckman Mod. IFCC Ref. without P5P
	U/l	47	38	56	4.50	9.00	Ortho Vitros MicroSlide visible
	U/l	48	38	58	5.00	10.0	Tris Buffer With P5P
	U/l	33	26	40	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	12.7	10.1	15.3	1.30	2.60	Enzymatic
	mmol/l	12.4	9.83	15.0	1.30	2.60	PEP Carboxylase
Bile Acids	µmol/l	25.3	20.2	30.4	2.55	5.10	5th Generation Colorimetric
	µmol/l	24.5	19.6	29.4	2.45	4.90	Enzymatic Colorimetric
	µmol/l	23.6	18.9	28.3	2.35	4.70	Enzymatic Colorimetric - Sentinel
Bilirubin Direct	mg/dl	1.06	0.837	1.28	0.110	0.220	Diazo with Dichloroaniline
	µmol/l	18.2	14.4	22.0	1.90	3.80	
	mg/dl	1.06	0.837	1.28	0.110	0.220	Diazo With Sulphanilic Acid
	µmol/l	18.2	14.4	22.0	1.90	3.80	
	mg/dl	0.854	0.675	1.03	0.088	0.176	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	14.6	11.5	17.7	1.55	3.10	
	mg/dl	1.12	0.885	1.36	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.2	15.2	23.2	2.00	4.00	
	mg/dl	1.13	0.893	1.37	0.120	0.240	Modified Jendrassik
	µmol/l	19.2	15.2	23.2	2.00	4.00	
	mg/dl	0.983	0.777	1.19	0.104	0.207	Oxidation to Biliverdin/Vanadate
	µmol/l	16.8	13.3	20.3	1.75	3.50	
Bilirubin Total	mg/dl	0.878	0.694	1.06	0.091	0.182	Roche DPD Doumas standardised
	µmol/l	15.0	11.9	18.1	1.55	3.10	
	mg/dl	1.13	0.893	1.37	0.120	0.240	Roche DPD JG standardised
	µmol/l	19.4	15.3	23.5	2.05	4.10	
	mg/dl	1.47	1.16	1.78	0.155	0.310	Abbott Alin/Arch cal batch no >97447/8/9
	µmol/l	25.2	19.9	30.5	2.65	5.30	
	mg/dl	1.49	1.18	1.80	0.155	0.310	Abbott Alinity Total Bilirubin 2
	µmol/l	25.4	20.1	30.7	2.65	5.30	

Method		Human Assayed Multi-Sera - Level 2					
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Bilirubin Total	mg/dl	1.50	1.19	1.81	0.155	0.310	Abbott Architect Total Bilirubin 2
	µmol/l	25.7	20.3	31.1	2.70	5.40	
	mg/dl	1.43	1.13	1.73	0.150	0.300	Diazo With Dichloroaniline
	µmol/l	24.5	19.4	29.6	2.55	5.10	
	mg/dl	1.58	1.25	1.91	0.165	0.330	Diazo With Sulphanilic Acid
	µmol/l	27.0	21.3	32.7	2.85	5.70	
	mg/dl	1.44	1.14	1.74	0.150	0.300	Diazonium Ion
	µmol/l	24.6	19.4	29.8	2.60	5.20	
	mg/dl	1.43	1.13	1.73	0.150	0.300	Dichlorophenyl Diazonium
	µmol/l	24.5	19.4	29.6	2.55	5.10	
	mg/dl	1.72	1.36	2.08	0.180	0.360	DPD (Beckman AU)
	µmol/l	29.4	23.2	35.6	3.10	6.20	
Calcium	mg/dl	2.04	1.61	2.47	0.215	0.430	Modified Jendrassik
	µmol/l	34.9	27.6	42.2	3.65	7.30	
	mg/dl	1.68	1.33	2.03	0.175	0.350	Ortho Vitros MicroSlide Total Bil
	µmol/l	28.7	22.7	34.7	3.00	6.00	
	mg/dl	1.69	1.34	2.04	0.175	0.350	Oxidation to Biliverdin/Vanadate
	µmol/l	28.9	22.8	35.0	3.05	6.10	
	mg/dl	8.50	7.65	9.35	0.425	0.850	Arsenazo III
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Calcium Ionised	mg/dl	8.42	7.58	9.26	0.420	0.840	Cresolphthalein Complexone
	mmol/l	2.10	1.89	2.31	0.105	0.210	
	mg/dl	8.50	7.65	9.35	0.425	0.850	NM-BAPTA
	mmol/l	2.12	1.91	2.33	0.105	0.210	
	mg/dl	8.58	7.72	9.44	0.430	0.860	Ortho Vitros Microslide Systems
Chloride	mmol/l	2.14	1.93	2.35	0.105	0.210	
	mg/dl	4.00	3.60	4.40	0.200	0.400	Ion Selective Electrode
	mmol/l	0.999	0.899	1.10	0.051	0.101	
Cholesterol	mmol/l	97.7	89.9	106	4.15	8.30	ISE Direct
	mmol/l	96.0	88.3	104	4.00	8.00	ISE Indirect
	mmol/l	99.0	91.1	107	4.00	8.00	Ortho Vitros Microslide Systems
Cholesterol	mg/dl	156	136	176	10.0	20.0	Abbott Alinity Cholesterol 2
	mmol/l	4.04	3.51	4.57	0.265	0.530	
	mg/dl	157	137	177	10.0	20.0	Abbott Architect Cholesterol 2
	mmol/l	4.06	3.53	4.59	0.265	0.530	
	mg/dl	158	137	179	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.10	3.57	4.63	0.265	0.530	
	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.13	3.59	4.67	0.270	0.540	

Method		Human Assayed Multi-Sera - Level 2					
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Cholesterol	mg/dl	153	133	173	10.0	20.0	Ortho Vitros Microslide Systems
	mmol/l	3.97	3.45	4.49	0.260	0.520	
	mg/dl	140	122	158	9.00	18.0	Siemens Dimension
	mmol/l	3.62	3.15	4.09	0.235	0.470	
Cholinesterase	U/l	5512	4410	6614	551	1102	Colorimetric - Butyrylthiocholine
CK Total	U/l	197	162	232	17.5	35.0	Abbott CK-NAC (IFCC)
	U/l	204	167	241	18.5	37.0	Beckman CK-NAC (IFCC)
	U/l	187	153	221	17.0	34.0	CK-NAC (IFCC)
	U/l	190	156	224	17.0	34.0	CK-NAC substrate start (DGKC)
	U/l	196	161	231	17.5	35.0	Creatine Phosphate Substrate Start
	U/l	194	159	229	17.5	35.0	Ortho Vitros Microslide Systems
Copper	µg/dl	102	81.6	122	10.0	20.0	Colorimetric
	µmol/l	16.0	12.8	19.2	1.60	3.20	
Creatinine	mg/dl	1.36	1.09	1.63	0.135	0.270	Abbott Alinity Creatinine 2
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.34	1.07	1.61	0.135	0.270	Abbott Architect Creatinine 2
	µmol/l	119	95.2	143	12.0	24.0	
	mg/dl	1.36	1.09	1.63	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.37	1.10	1.64	0.135	0.270	Enzymatic
	µmol/l	121	96.8	145	12.0	24.0	
	mg/dl	1.25	1.00	1.50	0.125	0.250	IDMS Traceable
	µmol/l	111	88.8	133	11.0	22.0	
	mg/dl	1.33	1.06	1.60	0.135	0.270	Jaffe Rate Blanked
	µmol/l	118	94.4	142	12.0	24.0	
	mg/dl	1.38	1.10	1.66	0.140	0.280	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	122	97.6	146	12.0	24.0	
mg/dl	1.32	1.06	1.58	0.130	0.260	Jaffe rate comp. (-18umol/l)	
µmol/l	117	93.6	140	11.5	23.0		
mg/dl	1.44	1.15	1.73	0.145	0.290	Roche Creatinine Plus	
µmol/l	127	102	152	12.5	25.0		
mg/dl	1.30	1.04	1.56	0.130	0.260	Vitros - IDMS traceable	
µmol/l	115	92.0	138	11.5	23.0		
D-3-Hydroxybutyrate	mmol/l	0.294	0.250	0.338	0.022	0.044	Tris buffer 100mmol pH 8.5
Free T4	ng/dl	1.10	0.825	1.38	0.140	0.280	Abbott Architect
	pg/ml	11.0	8.25	13.8	1.40	2.80	
	pmol/l	14.1	10.6	17.6	1.75	3.50	

Method		Human Assayed Multi-Sera - Level 2					
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.29	0.968	1.61	0.160	0.320	Roche Cobas 4000/e411
	pg/ml	12.9	9.68	16.1	1.60	3.20	
	pmol/l	16.5	12.4	20.6	2.05	4.10	
	ng/dl	1.29	0.968	1.61	0.160	0.320	Roche Cobas e402/e801
	pg/ml	12.9	9.68	16.1	1.60	3.20	
	pmol/l	16.6	12.5	20.7	2.05	4.10	
gamma-GT	U/l	52	44	60	4.00	8.00	Abbott Alinity GGT 2
	U/l	52	44	60	4.00	8.00	Abbott Architect GGT 2
	U/l	49	42	56	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
	U/l	52	44	60	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	58	49	67	4.50	9.00	Ortho Vitros Microslide Systems
Gentamicin	µg/ml	3.40	2.72	4.08	0.340	0.680	Gravimetric
	µmol/l	7.11	5.69	8.53	0.710	1.42	
GLDH	U/l	16	13	19	1.50	3.00	Triethanolamine buffer
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Oxidase
	mmol/l	6.00	5.10	6.90	0.450	0.900	
	mg/dl	105	89.3	121	8.00	16.0	Hexokinase
	mmol/l	5.85	4.97	6.73	0.440	0.880	
	mg/dl	105	89.3	121	8.00	16.0	Ortho Vitros Microslide Systems
	mmol/l	5.83	4.96	6.70	0.435	0.870	
HDL - Cholesterol	mg/dl	48.3	41.1	55.5	3.60	7.20	Direct HDL - Immunoseparation
	mmol/l	1.25	1.06	1.44	0.095	0.190	
	mg/dl	50.2	42.7	57.7	3.75	7.50	Direct HDL - PEGME
	mmol/l	1.30	1.11	1.49	0.095	0.190	
	mg/dl	51.0	43.4	58.6	3.80	7.60	Direct HDL - PPD
	mmol/l	1.32	1.12	1.52	0.100	0.200	
	mg/dl	47.5	40.4	54.6	3.55	7.10	Direct HDL - Roche 4th gen.
	mmol/l	1.23	1.05	1.41	0.090	0.180	
	mg/dl	51.7	43.9	59.5	3.90	7.80	HDL Ultra/Accel Selective Detergent
	mmol/l	1.34	1.14	1.54	0.100	0.200	
Immunoglobulin A	g/l	1.93	1.45	2.41	0.240	0.480	Turbidimetric (IFCC Cal.)
	mg/dl	193	145	241	24.0	48.0	
Immunoglobulin G	g/l	6.96	5.71	8.21	0.625	1.25	Turbidimetric (IFCC Cal.)
	mg/dl	696	571	821	62.5	125	
Immunoglobulin M	g/l	0.885	0.708	1.06	0.088	0.175	Turbidimetric (IFCC Cal.)
	mg/dl	88.5	70.8	106	8.75	17.5	

Method		Human Assayed Multi-Sera - Level 2						
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28								
Size: 20 x 5 ml		Range						
Analyte	Unit	Target	Low	High	1SD	2SD	Method	
Iron	µg/dl	113	92.7	133	10.0	20.0	Abbott Alinity Iron 2	
	µmol/l	20.2	16.6	23.8	1.80	3.60		
	µg/dl	116	95.1	137	10.5	21.0	Abbott Architect Chemilum	
	µmol/l	20.7	17.0	24.4	1.85	3.70		
	µg/dl	109	89.4	129	10.0	20.0	Colorimetric with ppt.	
	µmol/l	19.5	16.0	23.0	1.75	3.50		
	µg/dl	109	89.4	129	10.0	20.0	Colorimetric without ppt.	
	µmol/l	19.5	16.0	23.0	1.75	3.50		
	µg/dl	112	91.8	132	10.0	20.0	Ortho Vitros Microslide Systems	
	µmol/l	20.1	16.5	23.7	1.80	3.60		
	Lactate	mg/dl	13.8	11.3	16.3	1.25	2.50	Colorimetric - Lactate oxidase
		mmol/l	1.53	1.25	1.81	0.140	0.280	
	LD (LDH)	U/l	196	167	225	14.5	29.0	Abbott Alinity LD 2
		U/l	197	167	227	15.0	30.0	Abbott Architect LD 2
		U/l	203	173	233	15.0	30.0	L to P - IFCC
		U/l	205	174	236	15.5	31.0	Lactate to Pyruvate methods
U/l		236	201	271	17.5	35.0	Ortho Vitros IFCC Traceable	
U/l		405	344	466	30.5	61.0	P to L - German methods	
U/l		424	360	488	32.0	64.0	P to L Scandinavian & Dutch	
Lipase	U/l	44	35	53	4.50	9.00	Colorimetric Randox	
	U/l	37	30	44	3.50	7.00	Colorimetric Roche	
	U/l	253	203	303	25.0	50.0	Ortho Vitros Microslide Systems	
	U/l	39	31	47	4.00	8.00	Other Colorimetric	
Lithium	mg/dl	0.684	0.602	0.766	0.041	0.082	Spectrophotometric	
	mmol/l	0.985	0.867	1.10	0.058	0.115		
Magnesium	mg/dl	2.17	1.91	2.43	0.130	0.260	Chlorphosphonazo III	
	mmol/l	0.892	0.785	0.999	0.054	0.107		
	mg/dl	2.11	1.86	2.36	0.125	0.250	Enzymatic	
	mmol/l	0.870	0.766	0.974	0.052	0.104		
	mg/dl	2.17	1.91	2.43	0.130	0.260	Methylthymol Blue	
	mmol/l	0.892	0.785	0.999	0.054	0.107		
	mg/dl	2.14	1.88	2.40	0.130	0.260	Ortho Vitros Microslide Systems	
	mmol/l	0.882	0.776	0.988	0.053	0.106		
	mg/dl	2.17	1.91	2.43	0.130	0.260	Xylidyl Blue	
	mmol/l	0.893	0.786	1.00	0.054	0.107		
NEFA	mmol/l	1.06	0.848	1.27	0.105	0.210	Colorimetric	
Osmolality	mOsm/ Kg	299	239	359	30.0	60.0	Calculated	

Method		Human Assayed Multi-Sera - Level 2						
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28								
Size: 20 x 5 ml		Range						
Analyte	Unit	Target	Low	High	1SD	2SD	Method	
Osmolality	mOsm/ Kg	310	248	372	31.0	62.0	Freezing Point Depression	
Paracetamol (Acetamin)	mg/l	13.6	10.9	16.3	1.35	2.70	Gravimetric	
	mmol/l	0.090	0.072	0.108	0.009	0.018		
Phosphate Inorganic	mg/dl	4.65	3.95	5.35	0.350	0.700	Ortho Vitros Microslide Systems	
	mmol/l	1.50	1.28	1.72	0.110	0.220		
	mg/dl	4.53	3.85	5.21	0.340	0.680	Phosphomolybdate Enzymatic	
	mmol/l	1.46	1.24	1.68	0.110	0.220		
	mg/dl	4.53	3.85	5.21	0.340	0.680	Phosphomolybdate UV	
	mmol/l	1.46	1.24	1.68	0.110	0.220		
Potassium	mmol/l	4.25	3.91	4.59	0.170	0.340	Enzymatic	
	mmol/l	4.00	3.68	4.32	0.160	0.320	Ion Selective Electrode Method	
	mmol/l	4.10	3.77	4.43	0.165	0.330	ISE method - indirect	
	mmol/l	4.11	3.78	4.44	0.165	0.330	Ortho Vitros Microslide Systems	
Protein Total	g/dl	5.69	4.55	6.83	0.570	1.14	Abbott Alinity Total Protein 2	
	g/l	56.9	45.5	68.3	5.70	11.4		
	g/dl	5.90	4.72	7.08	0.590	1.18	Abbott Architect total Protein 2	
	g/l	59.0	47.2	70.8	5.90	11.8		
	g/dl	5.57	4.46	6.68	0.555	1.11	Biuret reaction - end point	
	g/l	55.7	44.6	66.8	5.55	11.1		
	g/dl	5.56	4.45	6.67	0.555	1.11	Biuret reaction - kinetic	
	g/l	55.6	44.5	66.7	5.55	11.1		
PSA Total	g/dl	5.70	4.56	6.84	0.570	1.14	Ortho Vitros Microslide Systems	
	g/l	57.0	45.6	68.4	5.70	11.4		
	ng/ml = µg/l	8.32	6.24	10.4	1.04	2.08	Abbott Architect/ Alinity	
	ng/ml = µg/l	10.1	7.58	12.6	1.25	2.50	Roche Cobas 4000/e411	
	ng/ml = µg/l	9.59	7.19	12.0	1.21	2.41	Roche Cobas e402/e801	
	ng/ml = µg/l	9.37	7.03	11.7	1.17	2.33	Roche Cobas e601/602	
	Salicylate	mg/dl	5.94	4.75	7.13	0.595	1.19	Gravimetric
		mmol/l	0.430	0.344	0.516	0.043	0.086	
Sodium	mmol/l	140	133	147	3.50	7.00	Ion Selective Electrode Method	
	mmol/l	142	135	149	3.50	7.00	ISE method - indirect	
	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems	
Theophylline	µg/ml	5.10	4.08	6.12	0.510	1.02	Gravimetric	
	µmol/l	28.3	22.6	34.0	2.85	5.70		

Method		Human Assayed Multi-Sera - Level 2					
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.09	0.872	1.31	0.110	0.220	Abbott Architect
	µU/ml = mIU/l	1.58	1.26	1.90	0.160	0.320	Roche Cobas 4000/e411
	µU/ml = mIU/l	1.48	1.18	1.78	0.150	0.300	Roche Cobas e402/e801
	µU/ml = mIU/l	1.56	1.25	1.87	0.155	0.310	Roche Cobas e601/ 602
TIBC	µg/dl	258	204	312	27.0	54.0	Calculated from Transferrin
	µmol/l	46.2	36.5	55.9	4.85	9.70	
	µg/dl	266	210	322	28.0	56.0	Direct Colorimetric
	µmol/l	47.6	37.6	57.6	5.00	10.0	
	µg/dl	238	188	288	25.0	50.0	
µmol/l	42.6	33.7	51.5	4.45	8.90		
Tobramycin	µg/ml	2.95	2.36	3.54	0.295	0.590	Gravimetric
	µmol/l	6.30	5.04	7.56	0.630	1.26	
Total T3	ng/dl	98.1	73.6	123	12.5	24.9	Abbott Architect
	ng/ml	0.983	0.737	1.23	0.124	0.247	
	nmol/l	1.51	1.13	1.89	0.190	0.380	
Total T4	ng/ml	57.2	42.9	71.5	7.15	14.3	Abbott Architect
	nmol/l	73.3	55.0	91.6	9.15	18.3	
	µg/dl	5.72	4.29	7.15	0.715	1.43	
Transferrin	g/l	1.77	1.42	2.12	0.175	0.350	Immunoturbidimetric
	mg/dl	177	142	212	17.5	35.0	
Triglycerides	mg/dl	93.8	78.8	109	7.60	15.2	Abbott Alinity i
	mmol/l	1.06	0.890	1.23	0.085	0.170	
	mg/dl	93.8	78.8	109	7.60	15.2	Abbott Architect Triglyceride 2
	mmol/l	1.06	0.890	1.23	0.085	0.170	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GK UV. no correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/Glycerol Dehydrogenase
	mmol/l	1.09	0.916	1.26	0.085	0.170	
mg/dl	95.6	80.3	111	7.70	15.4	Lipase/GPO-PAP - 0.11mmol/l correction	
mmol/l	1.08	0.907	1.25	0.085	0.170		

Method		Human Assayed Multi-Sera - Level 2					
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	119	100	138	9.50	19.0	Ortho Vitros Microslide Systems
	mmol/l	1.35	1.13	1.57	0.110	0.220	
	mg/dl	104	87.4	121	8.50	17.0	Siemens Atellica TRIG_ 2
	mmol/l	1.18	0.991	1.37	0.095	0.190	
Urea	mg/dl	47.7	40.5	54.9	3.60	7.20	Abbott Architect Urea Nitrogen 2
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.93	6.74	9.12	0.595	1.19	
	mg/dl	43.9	37.3	50.5	3.30	6.60	Ortho Vitros Microslide Systems
	mg/dl (BUN)	20.4	17.3	23.5	1.55	3.10	
	mmol/l	7.30	6.21	8.39	0.545	1.09	
	mg/dl	45.1	38.3	51.9	3.40	6.80	Urease - end point
	mg/dl (BUN)	21.0	17.9	24.1	1.55	3.10	
	mmol/l	7.50	6.38	8.62	0.560	1.12	
	mg/dl	45.6	38.8	52.4	3.40	6.80	Urease - kinetic
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
	mmol/l	7.59	6.45	8.73	0.570	1.14	
Uric Acid (Urate)	mg/dl	5.63	4.90	6.36	0.365	0.730	Abbott Alinity Uric Acid 2
	mmol/l	0.335	0.291	0.379	0.022	0.044	
	µmol/l	335	291	379	22.0	44.0	
	mg/dl	5.65	4.92	6.38	0.365	0.730	Abbott Architect Uric Acid 2
	mmol/l	0.336	0.292	0.380	0.022	0.044	
	µmol/l	336	292	380	22.0	44.0	
	mg/dl	5.83	5.07	6.59	0.380	0.760	Beckman AU Non US calibrator (66300)
	mmol/l	0.347	0.302	0.392	0.023	0.045	
	µmol/l	347	302	392	22.5	45.0	
	mg/dl	5.56	4.84	6.28	0.360	0.720	Ortho Vitros Microslide Systems
	mmol/l	0.331	0.288	0.374	0.022	0.043	
	µmol/l	331	288	374	21.5	43.0	
	mg/dl	5.73	4.99	6.47	0.370	0.740	Uricase @ 293 nm
	mmol/l	0.341	0.297	0.385	0.022	0.044	
	µmol/l	341	297	385	22.0	44.0	

Method			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	5.73	4.99	6.47	0.370	0.740	Uricase perox. no ascorb. ox.
	mmol/l	0.341	0.297	0.385	0.022	0.044	
	µmol/l	341	297	385	22.0	44.0	
	mg/dl	5.68	4.94	6.42	0.370	0.740	Uricase Perox. with ascorb. ox
	mmol/l	0.338	0.294	0.382	0.022	0.044	
	µmol/l	338	294	382	22.0	44.0	
	mg/dl	5.65	4.92	6.38	0.365	0.730	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.336	0.292	0.380	0.022	0.044	
	µmol/l	336	292	380	22.0	44.0	
Zinc	µg/dl	161	129	193	16.0	32.0	Colorimetric without deprot.
	µmol/l	24.6	19.7	29.5	2.45	4.90	

Randox RX series			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.98	3.38	4.58	0.300	0.600	Bromocresol Green
	g/l	39.8	33.8	45.8	3.00	6.00	
Alkaline Phosphatase	U/l	216	184	248	16.0	32.0	AMP optimised to IFCC
	U/l	331	281	381	25.0	50.0	Diethanolamine buffer - DEA
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	67	57	77	5.00	10.0	Randox Liquid Ethylidene pNPG7
Amylase Total	U/l	90	77	103	6.50	13.0	Randox Liquid Ethylidene pNPG7
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Bile Acids	µmol/l	25.3	20.2	30.4	2.55	5.10	5th Generation Colorimetric
Bilirubin Direct	mg/dl	1.21	0.956	1.46	0.125	0.250	Diazo With Sulphanilic Acid
	µmol/l	20.8	16.4	25.2	2.20	4.40	
	mg/dl	0.949	0.750	1.15	0.101	0.201	Oxidation to Biliverdin/Vanadate
	µmol/l	16.2	12.8	19.6	1.70	3.40	
Bilirubin Total	mg/dl	1.75	1.38	2.12	0.185	0.370	Diazo With Sulphanilic Acid
	µmol/l	29.9	23.6	36.2	3.15	6.30	
	mg/dl	1.64	1.30	1.98	0.170	0.340	Oxidation to Biliverdin/Vanadate
	µmol/l	28.0	22.1	33.9	2.95	5.90	
Calcium	mg/dl	8.74	7.87	9.61	0.435	0.870	Arsenazo III
	mmol/l	2.18	1.96	2.40	0.110	0.220	
Chloride	mmol/l	93.4	85.9	101	3.80	7.60	ISE Direct
Cholesterol	mg/dl	175	152	198	11.5	23.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.52	3.93	5.11	0.295	0.590	
CK Total	U/l	204	167	241	18.5	37.0	CK-NAC (IFCC)
	U/l	201	165	237	18.0	36.0	CK-NAC substrate start (DGKC)
Creatinine	mg/dl	1.34	1.07	1.61	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	119	95.2	143	12.0	24.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Enzymatic UV method
	µmol/l	127	102	152	12.5	25.0	
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-4-Nitroanilide
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.31	5.36	7.26	0.475	0.950	
	mg/dl	110	93.5	127	8.50	17.0	Hexokinase
	mmol/l	6.10	5.19	7.01	0.455	0.910	
HDL - Cholesterol	mg/dl	45.2	38.4	52.0	3.40	6.80	Direct HDL - Clearance method
	mmol/l	1.17	0.995	1.35	0.090	0.180	
Iron	µg/dl	126	103	149	11.5	23.0	Colorimetric without ppt.
	µmol/l	22.6	18.5	26.7	2.05	4.10	
Lactate	mg/dl	13.7	11.2	16.2	1.25	2.50	Colorimetric - Lactate oxidase
	mmol/l	1.52	1.25	1.79	0.135	0.270	

Randox RX series			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
LD (LDH)	U/l	214	182	246	16.0	32.0	L to P - IFCC
	U/l	409	348	470	30.5	61.0	P to L - German methods
Lipase	U/l	42	34	50	4.00	8.00	Colorimetric Randox
Magnesium	mg/dl	2.11	1.86	2.36	0.125	0.250	Xylidyl Blue
	mmol/l	0.870	0.766	0.974	0.052	0.104	
Phosphate Inorganic	mg/dl	4.59	3.90	5.28	0.345	0.690	Phosphomolybdate UV
	mmol/l	1.48	1.26	1.70	0.110	0.220	
Potassium	mmol/l	4.13	3.80	4.46	0.165	0.330	ISE Direct
Protein Total	g/dl	5.83	4.66	7.00	0.585	1.17	Biuret reaction - end point
	g/l	58.3	46.6	70.0	5.85	11.7	
Sodium	mmol/l	145	138	152	3.50	7.00	Enzymatic
	mmol/l	142	135	149	3.50	7.00	ISE Direct
TIBC	µg/dl	304	240	368	32.0	64.0	Direct Colorimetric
	µmol/l	54.4	43.0	65.8	5.70	11.4	
Triglycerides	mg/dl	101	84.8	117	8.00	16.0	Lipase/GPO-PAP No Correction
	mmol/l	1.14	0.958	1.32	0.090	0.180	
Urea	mg/dl	47.4	40.3	54.5	3.55	7.10	Urease - kinetic
	mg/dl (BUN)	22.1	18.8	25.4	1.65	3.30	
	mmol/l	7.89	6.71	9.07	0.590	1.18	
Uric Acid (Urate)	mg/dl	6.12	5.32	6.92	0.400	0.800	Uricase perox. no ascorb. ox.
	mmol/l	0.364	0.317	0.411	0.024	0.047	
	µmol/l	364	317	411	23.5	47.0	
	mg/dl	5.83	5.07	6.59	0.380	0.760	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.347	0.302	0.392	0.023	0.045	
	µmol/l	347	302	392	22.5	45.0	

Roche Cobas c111				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.91	3.32	4.50	0.295	0.590	Bromocresol Green
	g/l	39.1	33.2	45.0	2.95	5.90	
Alkaline Phosphatase	U/l	180	153	207	13.5	27.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	34	27	41	3.50	7.00	Tris Buffer Without P5P
Amylase Total	U/l	83	71	95	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	31	25	37	3.00	6.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.16	0.916	1.40	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.9	15.7	24.1	2.10	4.20	
	mg/dl	1.16	0.916	1.40	0.120	0.240	Roche DPD JG standardised
	µmol/l	19.9	15.7	24.1	2.10	4.20	
Bilirubin Total	mg/dl	1.48	1.17	1.79	0.155	0.310	Dichlorophenyl Diazonium
	µmol/l	25.3	20.0	30.6	2.65	5.30	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	NM-BAPTA
	mmol/l	2.13	1.92	2.34	0.105	0.210	
Cholesterol	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.04	3.51	4.57	0.265	0.530	
	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.12	3.58	4.66	0.270	0.540	
CK Total	U/l	187	153	221	17.0	34.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.39	1.11	1.67	0.140	0.280	Roche Creatinine Plus
	µmol/l	123	98.4	148	12.5	25.0	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	109	92.7	125	8.00	16.0	Hexokinase
	mmol/l	6.05	5.14	6.96	0.455	0.910	
HDL - Cholesterol	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL - Roche 4th gen.
	mmol/l	1.21	1.03	1.39	0.090	0.180	
LD (LDH)	U/l	211	179	243	16.0	32.0	L to P - IFCC
Magnesium	mg/dl	2.16	1.90	2.42	0.130	0.260	Xylidyl Blue
	mmol/l	0.888	0.781	0.995	0.054	0.107	
Phosphate Inorganic	mg/dl	4.49	3.82	5.16	0.335	0.670	Phosphomolybdate UV
	mmol/l	1.45	1.23	1.67	0.110	0.220	
Triglycerides	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP No Correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
Urea	mg/dl	43.9	37.3	50.5	3.30	6.60	Urease - kinetic
	mg/dl (BUN)	20.4	17.3	23.5	1.55	3.10	
	mmol/l	7.30	6.21	8.39	0.545	1.09	

Roche Cobas c111				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	5.71	4.97	6.45	0.370	0.740	Uricase perox. no ascorb. ox.
	mmol/l	0.340	0.296	0.384	0.022	0.044	
	µmol/l	340	296	384	22.0	44.0	
	mg/dl	5.66	4.92	6.40	0.370	0.740	Uricase Perox. with ascorb. ox
	mmol/l	0.337	0.293	0.381	0.022	0.044	
	µmol/l	337	293	381	22.0	44.0	

Roche Cobas c303/c503				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Alkaline Phosphatase	U/l	168	143	193	12.5	25.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris Buffer With P5P
	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glut.-3-carb.-4-nitro.

Roche Cobas c311				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.02	3.42	4.62	0.300	0.600	Bromocresol Green
	g/l	40.2	34.2	46.2	3.00	6.00	
Alkaline Phosphatase	U/l	178	151	205	13.5	27.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	84	71	97	6.50	13.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	33	26	40	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	12.2	9.67	14.7	1.25	2.50	Enzymatic
Bilirubin Direct	mg/dl	1.16	0.916	1.40	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.9	15.7	24.1	2.10	4.20	
	mg/dl	1.21	0.956	1.46	0.125	0.250	Roche DPD JG standardised
	µmol/l	20.7	16.4	25.0	2.15	4.30	
Bilirubin Total	mg/dl	1.47	1.16	1.78	0.155	0.310	Diazonium Ion
	µmol/l	25.2	19.9	30.5	2.65	5.30	
	mg/dl	1.44	1.14	1.74	0.150	0.300	Dichlorophenyl Diazonium
	µmol/l	24.7	19.5	29.9	2.60	5.20	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	NM-BAPTA
	mmol/l	2.13	1.92	2.34	0.105	0.210	
Chloride	mmol/l	93.5	86.0	101	3.75	7.50	ISE Indirect
Cholesterol	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.11	3.58	4.64	0.265	0.530	
	mg/dl	161	140	182	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.16	3.62	4.70	0.270	0.540	
CK Total	U/l	193	158	228	17.5	35.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.40	1.12	1.68	0.140	0.280	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	124	99.2	149	12.5	25.0	
	mg/dl	1.45	1.16	1.74	0.145	0.290	Roche Creatinine Plus
	µmol/l	128	102	154	13.0	26.0	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	106	90.1	122	8.00	16.0	Hexokinase
	mmol/l	5.91	5.02	6.80	0.445	0.890	
HDL - Cholesterol	mg/dl	48.6	41.3	55.9	3.65	7.30	Direct HDL - Roche 4th gen.
	mmol/l	1.26	1.07	1.45	0.095	0.190	
Iron	µg/dl	109	89.4	129	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.5	16.0	23.0	1.75	3.50	
Lactate	mg/dl	13.7	11.2	16.2	1.25	2.50	Colorimetric - Lactate oxidase
	mmol/l	1.52	1.25	1.79	0.135	0.270	
LD (LDH)	U/l	205	174	236	15.5	31.0	L to P - IFCC
Lipase	U/l	36	29	43	3.50	7.00	Colorimetric Roche

Roche Cobas c311			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Magnesium	mg/dl	2.16	1.90	2.42	0.130	0.260	Xylidyl Blue
	mmol/l	0.889	0.782	0.996	0.054	0.107	
Phosphate Inorganic	mg/dl	4.59	3.90	5.28	0.345	0.690	Phosphomolybdate UV
	mmol/l	1.48	1.26	1.70	0.110	0.220	
Potassium	mmol/l	4.15	3.82	4.48	0.165	0.330	ISE method - indirect
Protein Total	g/dl	5.62	4.50	6.74	0.560	1.12	Biuret reaction - end point
	g/l	56.2	45.0	67.4	5.60	11.2	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µg/dl	243	192	294	25.5	51.0	FE+UIBC(saturation with iron)
	µmol/l	43.5	34.4	52.6	4.55	9.10	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease - kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.75	6.59	8.91	0.580	1.16	
Uric Acid (Urate)	mg/dl	5.61	4.88	6.34	0.365	0.730	Uricase perox. no ascorb. ox.
	mmol/l	0.334	0.291	0.377	0.022	0.043	
	µmol/l	334	291	377	21.5	43.0	
	mg/dl	5.75	5.00	6.50	0.375	0.750	Uricase Perox. with ascorb. ox
	mmol/l	0.342	0.298	0.386	0.022	0.044	
	µmol/l	342	298	386	22.0	44.0	
	mg/dl	5.73	4.99	6.47	0.370	0.740	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.341	0.297	0.385	0.022	0.044	
	µmol/l	341	297	385	22.0	44.0	

Roche Cobas c501/c502				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	4.01	3.41	4.61	0.300	0.600	Bromocresol Green
	g/l	40.1	34.1	46.1	3.00	6.00	
	g/dl	3.98	3.38	4.58	0.300	0.600	Bromocresol Purple
	g/l	39.8	33.8	45.8	3.00	6.00	
Alkaline Phosphatase	U/l	185	157	213	14.0	28.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	37	30	44	3.50	7.00	Tris Buffer Without P5P
Amylase Pancreatic	U/l	58	49	67	4.50	9.00	Roche Liquid Stable pNPG7
Amylase Total	U/l	83	71	95	6.00	12.0	Roche Integra 2-chloro-pNPG7
	U/l	83	71	95	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	47	38	56	4.50	9.00	Tris Buffer With P5P
	U/l	31	25	37	3.00	6.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	12.5	9.91	15.1	1.30	2.60	Enzymatic
Bile Acids	µmol/l	24.5	19.6	29.4	2.45	4.90	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.18	0.932	1.43	0.125	0.250	Diazo With Sulphanilic Acid
	µmol/l	20.2	16.0	24.4	2.10	4.20	
	mg/dl	1.13	0.893	1.37	0.120	0.240	Dichlorophenyl Diazonium
	µmol/l	19.4	15.3	23.5	2.05	4.10	
	mg/dl	0.918	0.725	1.11	0.096	0.192	Roche (US calibrator only)
	µmol/l	15.7	12.4	19.0	1.65	3.30	
	mg/dl	1.15	0.909	1.39	0.120	0.240	Roche DPD JG standardised
	µmol/l	19.7	15.6	23.8	2.05	4.10	
Bilirubin Total	mg/dl	1.46	1.15	1.77	0.155	0.310	Diazo With Sulphanilic Acid
	µmol/l	25.0	19.8	30.2	2.60	5.20	
	mg/dl	1.42	1.12	1.72	0.150	0.300	Diazonium Ion
	µmol/l	24.3	19.2	29.4	2.55	5.10	
	mg/dl	1.44	1.14	1.74	0.150	0.300	Dichlorophenyl Diazonium
	µmol/l	24.7	19.5	29.9	2.60	5.20	
Calcium	mg/dl	8.54	7.69	9.39	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.13	1.92	2.34	0.105	0.210	
	mg/dl	8.54	7.69	9.39	0.425	0.850	NM-BAPTA
	mmol/l	2.13	1.92	2.34	0.105	0.210	
Chloride	mmol/l	93.1	85.7	101	3.95	7.90	ISE Indirect
Cholesterol	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.12	3.58	4.66	0.270	0.540	
	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.13	3.59	4.67	0.270	0.540	
Cholinesterase	U/l	5466	4373	6559	547	1093	Colorimetric - Butyrylthiocholine
CK Total	U/l	187	153	221	17.0	34.0	CK-NAC (IFCC)

Roche Cobas c501/c502				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
CK Total	U/l	190	156	224	17.0	34.0	CK-NAC substrate start (DGKC)
Creatinine	mg/dl	1.36	1.09	1.63	0.135	0.270	Alkaline picrate no deproteinisation
	µmol/l	120	96.0	144	12.0	24.0	
	mg/dl	1.42	1.14	1.70	0.140	0.280	Enzymatic
	µmol/l	126	101	151	12.5	25.0	
	mg/dl	1.36	1.09	1.63	0.135	0.270	Jaffe rate blanked comp. (-26umol/l)
	µmol/l	120	96.0	144	12.0	24.0	
gamma-GT	mg/dl	1.42	1.14	1.70	0.140	0.280	Roche Creatinine Plus
	µmol/l	126	101	151	12.5	25.0	
glucose	U/l	46	39	53	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
	U/l	52	44	60	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	106	90.1	122	8.00	16.0	Hexokinase
	mmol/l	5.86	4.98	6.74	0.440	0.880	
HDL - Cholesterol	mg/dl	47.9	40.7	55.1	3.60	7.20	Direct HDL - Roche 4th gen.
	mmol/l	1.24	1.05	1.43	0.095	0.190	
Iron	µg/dl	111	91.0	131	10.0	20.0	Colorimetric with ppt.
	µmol/l	19.8	16.2	23.4	1.80	3.60	
	µg/dl	110	90.2	130	10.0	20.0	Colorimetric without ppt.
	µmol/l	19.7	16.2	23.2	1.75	3.50	
Lactate	mg/dl	13.8	11.3	16.3	1.25	2.50	Colorimetric - Lactate oxidase
	mmol/l	1.53	1.25	1.81	0.140	0.280	
LD (LDH)	U/l	204	173	235	15.5	31.0	L to P - IFCC
Lipase	U/l	37	30	44	3.50	7.00	Colorimetric Roche
Lithium	mg/dl	0.682	0.600	0.764	0.041	0.082	Spectrophotometric
	mmol/l	0.982	0.864	1.10	0.059	0.118	
Magnesium	mg/dl	2.15	1.89	2.41	0.130	0.260	Chlorphosphonazo III
	mmol/l	0.884	0.778	0.990	0.053	0.106	
	mg/dl	2.17	1.91	2.43	0.130	0.260	Xylidyl Blue
	mmol/l	0.895	0.788	1.00	0.053	0.105	
Phosphate Inorganic	mg/dl	4.49	3.82	5.16	0.335	0.670	Phosphomolybdate Enzymatic
	mmol/l	1.45	1.23	1.67	0.110	0.220	
	mg/dl	4.46	3.79	5.13	0.335	0.670	Phosphomolybdate UV
	mmol/l	1.44	1.22	1.66	0.110	0.220	
Potassium	mmol/l	4.13	3.80	4.46	0.165	0.330	ISE method - indirect
Protein Total	g/dl	5.56	4.45	6.67	0.555	1.11	Biuret reaction - end point
	g/l	55.6	44.5	66.7	5.55	11.1	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µg/dl	277	219	335	29.0	58.0	Calculated from Transferrin
	µmol/l	49.5	39.1	59.9	5.20	10.4	

Roche Cobas c501/c502			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
TIBC	µg/dl	237	187	287	25.0	50.0	FE+UIBC(saturation with iron)
	µmol/l	42.4	33.5	51.3	4.45	8.90	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	45.7	38.8	52.6	3.45	6.90	Urease - kinetic
	mg/dl (BUN)	21.3	18.1	24.5	1.60	3.20	
	mmol/l	7.60	6.46	8.74	0.570	1.14	
Uric Acid (Urate)	mg/dl	5.66	4.92	6.40	0.370	0.740	Uricase perox. no ascorb. ox.
	mmol/l	0.337	0.293	0.381	0.022	0.044	
	µmol/l	337	293	381	22.0	44.0	
	mg/dl	5.58	4.85	6.31	0.365	0.730	Uricase Perox. with ascorb. ox
	mmol/l	0.332	0.289	0.375	0.022	0.043	
	µmol/l	332	289	375	21.5	43.0	
	mg/dl	5.66	4.92	6.40	0.370	0.740	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.337	0.293	0.381	0.022	0.044	
	µmol/l	337	293	381	22.0	44.0	

Roche Cobas c701 / c702 / c711				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.98	3.38	4.58	0.300	0.600	Bromocresol Green
	g/l	39.8	33.8	45.8	3.00	6.00	
	g/dl	3.94	3.35	4.53	0.295	0.590	Bromocresol Purple
	g/l	39.4	33.5	45.3	2.95	5.90	
Alkaline Phosphatase	U/l	174	148	200	13.0	26.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris Buffer With P5P
	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Amylase Total	U/l	83	71	95	6.00	12.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	32	26	38	3.00	6.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	12.9	10.2	15.6	1.35	2.70	Enzymatic
Bile Acids	µmol/l	26.0	20.8	31.2	2.60	5.20	Enzymatic Colorimetric
Bilirubin Direct	mg/dl	1.17	0.924	1.42	0.125	0.250	Dichlorophenyl Diazonium
	µmol/l	20.0	15.8	24.2	2.10	4.20	
	mg/dl	0.895	0.707	1.08	0.093	0.185	Oxidation to Biliverdin/Vanadate
	µmol/l	15.3	12.1	18.5	1.60	3.20	
	mg/dl	0.901	0.712	1.09	0.095	0.189	Roche DPD Doumas standardised
	µmol/l	15.4	12.2	18.6	1.60	3.20	
	mg/dl	1.18	0.932	1.43	0.125	0.250	Roche DPD JG standardised
	µmol/l	20.1	15.9	24.3	2.10	4.20	
Bilirubin Total	mg/dl	1.44	1.14	1.74	0.150	0.300	Diazonium Ion
	µmol/l	24.6	19.4	29.8	2.60	5.20	
	mg/dl	1.46	1.15	1.77	0.155	0.310	Dichlorophenyl Diazonium
	µmol/l	24.9	19.7	30.1	2.60	5.20	
Calcium	mg/dl	8.46	7.61	9.31	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.11	1.90	2.32	0.105	0.210	
	mg/dl	8.46	7.61	9.31	0.425	0.850	NM-BAPTA
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Chloride	mmol/l	95.6	88.0	103	3.70	7.40	ISE Indirect
Cholesterol	mg/dl	158	137	179	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.09	3.56	4.62	0.265	0.530	
	mg/dl	159	138	180	10.5	21.0	Cholesterol Oxidase - IDMS
	mmol/l	4.11	3.58	4.64	0.265	0.530	
Cholinesterase	U/l	5405	4324	6486	541	1081	Colorimetric - Butyrylthiocholine
CK Total	U/l	190	156	224	17.0	34.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.39	1.11	1.67	0.140	0.280	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	123	98.4	148	12.5	25.0	
	mg/dl	1.44	1.15	1.73	0.145	0.290	Roche Creatinine Plus
	µmol/l	127	102	152	12.5	25.0	

Roche Cobas c701 / c702 / c711				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma glut.-3-carb.-4-nitro.
	U/l	51	43	59	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	104	88.4	120	8.00	16.0	Hexokinase
	mmol/l	5.79	4.92	6.66	0.435	0.870	
HDL - Cholesterol	mg/dl	46.7	39.7	53.7	3.50	7.00	Direct HDL - Roche 4th gen.
	mmol/l	1.21	1.03	1.39	0.090	0.180	
Iron	µg/dl	105	86.1	124	9.50	19.0	Colorimetric with ppt.
	µmol/l	18.8	15.4	22.2	1.70	3.40	
	µg/dl	105	86.1	124	9.50	19.0	Colorimetric without ppt.
	µmol/l	18.7	15.3	22.1	1.70	3.40	
Lactate	mg/dl	13.5	11.1	15.9	1.20	2.40	Colorimetric - Lactate oxidase
	mmol/l	1.50	1.23	1.77	0.135	0.270	
LD (LDH)	U/l	203	173	233	15.0	30.0	L to P - IFCC
Lipase	U/l	37	30	44	3.50	7.00	Colorimetric Roche
Lithium	mg/dl	0.690	0.607	0.773	0.042	0.083	Spectrophotometric
	mmol/l	0.993	0.874	1.11	0.059	0.117	
Magnesium	mg/dl	2.20	1.94	2.46	0.130	0.260	Xylidyl Blue
	mmol/l	0.905	0.796	1.01	0.053	0.105	
Phosphate Inorganic	mg/dl	4.46	3.79	5.13	0.335	0.670	Phosphomolybdate UV
	mmol/l	1.44	1.22	1.66	0.110	0.220	
Potassium	mmol/l	4.15	3.82	4.48	0.165	0.330	ISE method - indirect
Protein Total	g/dl	5.56	4.45	6.67	0.555	1.11	Biuret reaction - end point
	g/l	55.6	44.5	66.7	5.55	11.1	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
TIBC	µg/dl	248	196	300	26.0	52.0	Calculated from Transferrin
	µmol/l	44.4	35.1	53.7	4.65	9.30	
	µg/dl	241	190	292	25.5	51.0	FE+UIBC(saturation with iron)
	µmol/l	43.1	34.0	52.2	4.55	9.10	
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GK UV. no correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
	mg/dl	96.5	81.1	112	7.75	15.5	Lipase/GPO-PAP No Correction
	mmol/l	1.09	0.916	1.26	0.085	0.170	
Urea	mg/dl	44.7	38.0	51.4	3.35	6.70	Urease - kinetic
	mg/dl (BUN)	20.8	17.7	23.9	1.55	3.10	
	mmol/l	7.43	6.32	8.54	0.555	1.11	
Uric Acid (Urate)	mg/dl	5.51	4.79	6.23	0.360	0.720	Uricase perox. no ascorb. ox.
	mmol/l	0.328	0.285	0.371	0.022	0.043	
	µmol/l	328	285	371	21.5	43.0	

Roche Cobas c701 / c702 / c711				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Uric Acid (Urate)	mg/dl	5.61	4.88	6.34	0.365	0.730	Uricase Perox. with ascorb. ox
	mmol/l	0.334	0.291	0.377	0.022	0.043	
	µmol/l	334	291	377	21.5	43.0	
	mg/dl	5.55	4.83	6.27	0.360	0.720	Uricase Perox. with ascorb. ox @ 546nm
	mmol/l	0.330	0.287	0.373	0.022	0.043	
	µmol/l	330	287	373	21.5	43.0	

Roche Cobas e402/e801				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Free T4	ng/dl	1.29	0.968	1.61	0.160	0.320	Roche Cobas e402/e801
	pg/ml	12.9	9.68	16.1	1.60	3.20	
	pmol/l	16.5	12.4	20.6	2.05	4.10	
PSA Total	ng/ml = µg/l	9.59	7.19	12.0	1.21	2.41	Roche Cobas e402/e801
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.48	1.18	1.78	0.150	0.300	Roche Cobas e402/e801

Roche Cobas e601/602				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
PSA Total	ng/ml = µg/l	9.40	7.05	11.8	1.20	2.40	Roche Cobas e601/602
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.58	1.26	1.90	0.160	0.320	Roche Cobas e601/ 602
Total T4	ng/ml	61.8	46.4	77.2	7.70	15.4	Roche Cobas e601/ 602
	nmol/l	79.2	59.4	99.0	9.90	19.8	
	µg/dl	6.18	4.64	7.72	0.770	1.54	

Roche Integra			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.98	3.38	4.58	0.300	0.600	Bromocresol Green
	g/l	39.8	33.8	45.8	3.00	6.00	
Alkaline Phosphatase	U/l	185	157	213	14.0	28.0	Roche AMP buffer IFCC
ALT (GPT)	U/l	33	26	40	3.50	7.00	Tris Buffer Without P5P
Amylase Total	U/l	84	71	97	6.50	13.0	Roche Liquid Stable pNPG7
AST (GOT)	U/l	30	24	36	3.00	6.00	Tris Buffer Without P5P
Bilirubin Total	mg/dl	1.49	1.18	1.80	0.155	0.310	Dichlorophenyl Diazonium
	µmol/l	25.4	20.1	30.7	2.65	5.30	
Calcium	mg/dl	8.46	7.61	9.31	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.11	1.90	2.32	0.105	0.210	
	mg/dl	8.46	7.61	9.31	0.425	0.850	NM-BAPTA
	mmol/l	2.11	1.90	2.32	0.105	0.210	
Chloride	mmol/l	96.2	88.5	104	3.90	7.80	ISE Indirect
Cholesterol	mg/dl	157	137	177	10.0	20.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.07	3.54	4.60	0.265	0.530	
	mg/dl	156	136	176	10.0	20.0	Cholesterol Oxidase - IDMS
	mmol/l	4.05	3.52	4.58	0.265	0.530	
CK Total	U/l	185	152	218	16.5	33.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.33	1.06	1.60	0.135	0.270	Jaffe rate comp. (-18umol/l)
	µmol/l	118	94.4	142	12.0	24.0	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	108	91.8	124	8.00	16.0	Hexokinase
	mmol/l	5.99	5.09	6.89	0.450	0.900	
HDL - Cholesterol	mg/dl	48.3	41.1	55.5	3.60	7.20	Direct HDL - Roche 4th gen.
	mmol/l	1.25	1.06	1.44	0.095	0.190	
Iron	µg/dl	112	91.8	132	10.0	20.0	Colorimetric without ppt.
	µmol/l	20.1	16.5	23.7	1.80	3.60	
LD (LDH)	U/l	208	177	239	15.5	31.0	L to P - IFCC
Lipase	U/l	37	30	44	3.50	7.00	Colorimetric Roche
Magnesium	mg/dl	2.17	1.91	2.43	0.130	0.260	Chlorphosphonazo III
	mmol/l	0.891	0.784	0.998	0.054	0.107	
	mg/dl	2.16	1.90	2.42	0.130	0.260	Xylidyl Blue
	mmol/l	0.889	0.782	0.996	0.054	0.107	
Phosphate Inorganic	mg/dl	4.65	3.95	5.35	0.350	0.700	Phosphomolybdate UV
	mmol/l	1.50	1.28	1.72	0.110	0.220	
Potassium	mmol/l	4.05	3.73	4.37	0.160	0.320	ISE method - indirect
Protein Total	g/dl	5.41	4.33	6.49	0.540	1.08	Biuret reaction - end point
	g/l	54.1	43.3	64.9	5.40	10.8	

Roche Integra			Human Assayed Multi-Sera - Level 2				
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	97.3	81.7	113	7.85	15.7	Lipase/GPO-PAP No Correction
	mmol/l	1.10	0.924	1.28	0.090	0.180	
Urea	mg/dl	43.8	37.2	50.4	3.30	6.60	Urease - kinetic
	mg/dl (BUN)	20.4	17.3	23.5	1.55	3.10	
	mmol/l	7.29	6.20	8.38	0.545	1.09	
Uric Acid (Urate)	mg/dl	5.78	5.03	6.53	0.375	0.750	Uricase perox. no ascorb. ox.
	mmol/l	0.344	0.299	0.389	0.023	0.045	
	µmol/l	344	299	389	22.5	45.0	
	mg/dl	5.71	4.97	6.45	0.370	0.740	Uricase Perox. with ascorb. ox
	mmol/l	0.340	0.296	0.384	0.022	0.044	
	µmol/l	340	296	384	22.0	44.0	

Siemens ADVIA Chemistry Instruments				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.81	3.24	4.38	0.285	0.570	Bromocresol Green
	g/l	38.1	32.4	43.8	2.85	5.70	
Alkaline Phosphatase	U/l	171	145	197	13.0	26.0	AMP optimised to IFCC
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris Buffer Without P5P
Amylase Total	U/l	85	72	98	6.50	13.0	Siemens - blocked pNPG7
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris Buffer Without P5P
Bilirubin Direct	mg/dl	1.02	0.806	1.23	0.105	0.210	Oxidation to Biliverdin/Vanadate
	µmol/l	17.4	13.7	21.1	1.85	3.70	
Bilirubin Total	mg/dl	1.74	1.37	2.11	0.185	0.370	Oxidation to Biliverdin/Vanadate
	µmol/l	29.7	23.5	35.9	3.10	6.20	
Calcium	mg/dl	8.50	7.65	9.35	0.425	0.850	Cresolphthalein Complexone
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Chloride	mmol/l	98.1	90.3	106	3.95	7.90	ISE Indirect
Cholesterol	mg/dl	158	137	179	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.09	3.56	4.62	0.265	0.530	
CK Total	U/l	183	150	216	16.5	33.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.41	1.13	1.69	0.140	0.280	Enzymatic
	µmol/l	125	100	150	12.5	25.0	
gamma-GT	U/l	52	44	60	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	105	89.3	121	8.00	16.0	Glucose Oxidase
	mmol/l	5.82	4.95	6.69	0.435	0.870	
HDL - Cholesterol	mg/dl	42.9	36.5	49.3	3.20	6.40	Direct HDL - Clearance method
	mmol/l	1.11	0.944	1.28	0.085	0.170	
Iron	µg/dl	107	87.7	126	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.2	15.7	22.7	1.75	3.50	
LD (LDH)	U/l	208	177	239	15.5	31.0	L to P - IFCC
Magnesium	mg/dl	2.11	1.86	2.36	0.125	0.250	Xylidyl Blue
	mmol/l	0.869	0.765	0.973	0.052	0.104	
Phosphate Inorganic	mg/dl	4.59	3.90	5.28	0.345	0.690	Phosphomolybdate UV
	mmol/l	1.48	1.26	1.70	0.110	0.220	
Potassium	mmol/l	4.12	3.79	4.45	0.165	0.330	ISE method - indirect
Protein Total	g/dl	5.54	4.43	6.65	0.555	1.11	Biuret reaction - end point
	g/l	55.4	44.3	66.5	5.55	11.1	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	103	86.5	120	8.50	17.0	Lipase/GPO-PAP No Correction
	mmol/l	1.16	0.974	1.35	0.095	0.190	

Siemens ADVIA Chemistry Instruments				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Urea	mg/dl	47.7	40.5	54.9	3.60	7.20	Urease - kinetic
	mg/dl (BUN)	22.2	18.9	25.5	1.65	3.30	
	mmol/l	7.93	6.74	9.12	0.595	1.19	
Uric Acid (Urate)	mg/dl	5.76	5.01	6.51	0.375	0.750	Uricase perox. no ascorb. ox.
	mmol/l	0.343	0.298	0.388	0.023	0.045	
	μmol/l	343	298	388	22.5	45.0	

Siemens Atellica Solution				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.90	3.32	4.48	0.290	0.580	Bromocresol Green
	g/l	39.0	33.2	44.8	2.90	5.80	
	g/dl	4.00	3.40	4.60	0.300	0.600	Bromocresol Purple
	g/l	40.0	34.0	46.0	3.00	6.00	
Alkaline Phosphatase	U/l	180	153	207	13.5	27.0	AMP optimised to IFCC
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris Buffer With P5P
	U/l	42	34	50	4.00	8.00	Tris Buffer Without P5P
Amylase Total	U/l	93	79	107	7.00	14.0	Siemens - blocked pNPG7
AST (GOT)	U/l	48	38	58	5.00	10.0	Tris Buffer With P5P
	U/l	36	29	43	3.50	7.00	Tris Buffer Without P5P
Bicarbonate	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
	mmol/l	13.2	10.5	15.9	1.35	2.70	PEP Carboxylase
Bile Acids	µmol/l	23.7	19.0	28.4	2.35	4.70	Enzymatic Colorimetric
	µmol/l	21.7	17.4	26.0	2.15	4.30	Enzymatic Colorimetric - Sentinel
Bilirubin Direct	mg/dl	0.977	0.772	1.18	0.102	0.203	Oxidation to Biliverdin/Vanadate
	µmol/l	16.7	13.2	20.2	1.75	3.50	
Bilirubin Total	mg/dl	1.39	1.10	1.68	0.145	0.290	Diazo With Dichloroaniline
	µmol/l	23.8	18.8	28.8	2.50	5.00	
	mg/dl	1.67	1.32	2.02	0.175	0.350	Oxidation to Biliverdin/Vanadate
	µmol/l	28.5	22.5	34.5	3.00	6.00	
Calcium	mg/dl	8.86	7.97	9.75	0.445	0.890	Arsenazo III
	mmol/l	2.21	1.99	2.43	0.110	0.220	
	mg/dl	8.30	7.47	9.13	0.415	0.830	Cresolphthalein Complexone
	mmol/l	2.07	1.86	2.28	0.105	0.210	
Chloride	mmol/l	100	92.0	108	4.00	8.00	ISE Indirect
Cholesterol	mg/dl	161	140	182	10.5	21.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.17	3.63	4.71	0.270	0.540	
CK Total	U/l	187	153	221	17.0	34.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.38	1.10	1.66	0.140	0.280	Enzymatic
	µmol/l	122	97.6	146	12.0	24.0	
	mg/dl	1.38	1.10	1.66	0.140	0.280	Jaffe rate blanked comp. (-26µmol/l)
	µmol/l	122	97.6	146	12.0	24.0	
Free T4	ng/dl	1.20	0.900	1.50	0.150	0.300	Siemens Atellica IM
	pg/ml	12.0	9.00	15.0	1.50	3.00	
	pmol/l	15.4	11.6	19.2	1.90	3.80	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	114	96.9	131	8.50	17.0	Glucose Oxidase
	mmol/l	6.30	5.36	7.24	0.470	0.940	

Siemens Atellica Solution				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Glucose	mg/dl	105	89.3	121	8.00	16.0	Hexokinase
	mmol/l	5.83	4.96	6.70	0.435	0.870	
HDL - Cholesterol	mg/dl	54.4	46.2	62.6	4.10	8.20	HDL Ultra/Accel Selective Detergent
	mmol/l	1.41	1.20	1.62	0.105	0.210	
Iron	µg/dl	108	88.6	127	9.50	19.0	Colorimetric without ppt.
	µmol/l	19.3	15.8	22.8	1.75	3.50	
Lactate	mg/dl	14.0	11.5	16.5	1.25	2.50	Colorimetric - Lactate oxidase
	mmol/l	1.55	1.27	1.83	0.140	0.280	
LD (LDH)	U/l	204	173	235	15.5	31.0	L to P - IFCC
	U/l	205	174	236	15.5	31.0	L to P Siemens/Dade - non-IFCC
Magnesium	mg/dl	2.13	1.87	2.39	0.130	0.260	Xylidyl Blue
	mmol/l	0.878	0.773	0.983	0.053	0.105	
Phosphate Inorganic	mg/dl	4.65	3.95	5.35	0.350	0.700	Phosphomolybdate UV
	mmol/l	1.50	1.28	1.72	0.110	0.220	
Potassium	mmol/l	4.03	3.71	4.35	0.160	0.320	ISE method - indirect
Protein Total	g/dl	5.56	4.45	6.67	0.555	1.11	Biuret reaction - end point
	g/l	55.6	44.5	66.7	5.55	11.1	
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml = mIU/l	1.25	1.00	1.50	0.125	0.250	Siemens Atellica IM
Triglycerides	mg/dl	104	87.4	121	8.50	17.0	Lipase/GPO-PAP No Correction
	mmol/l	1.18	0.991	1.37	0.095	0.190	
	mg/dl	104	87.4	121	8.50	17.0	Siemens Atellica TRIG_2
	mmol/l	1.18	0.991	1.37	0.095	0.190	
Urea	mg/dl	48.3	41.1	55.5	3.60	7.20	Urease - kinetic
	mg/dl (BUN)	22.5	19.1	25.9	1.70	3.40	
	mmol/l	8.03	6.83	9.23	0.600	1.20	
Uric Acid (Urate)	mg/dl	5.93	5.16	6.70	0.385	0.770	Uricase perox. no ascorb. ox.
	mmol/l	0.353	0.307	0.399	0.023	0.046	
	µmol/l	353	307	399	23.0	46.0	
	mg/dl	5.75	5.00	6.50	0.375	0.750	Uricase Perox. with ascorb. ox
	mmol/l	0.342	0.298	0.386	0.022	0.044	
	µmol/l	342	298	386	22.0	44.0	

Siemens Dimension EXL/200				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.94	3.35	4.53	0.295	0.590	Bromocresol Purple
	g/l	39.4	33.5	45.3	2.95	5.90	
Alkaline Phosphatase	U/l	188	160	216	14.0	28.0	Siemens/Dade Dimension AMP buffer
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris Buffer With P5P
Amylase Total	U/l	86	73	99	6.50	13.0	Siemens/Dade Behring 2-chloro-pNPG3
AST (GOT)	U/l	43	34	52	4.50	9.00	Siemens/Dade standard non IFCC corr.
	U/l	45	36	54	4.50	9.00	Tris Buffer With P5P
Bilirubin Direct	mg/dl	0.860	0.679	1.04	0.090	0.180	Diazo/ Sulphanilic Siemens Dimension
	µmol/l	14.7	11.6	17.8	1.55	3.10	
Bilirubin Total	mg/dl	1.74	1.37	2.11	0.185	0.370	Diazo With Sulphanilic Acid
	µmol/l	29.8	23.5	36.1	3.15	6.30	
Calcium	mg/dl	8.18	7.36	9.00	0.410	0.820	Cresolphthalein Complexone
	mmol/l	2.04	1.84	2.24	0.100	0.200	
Chloride	mmol/l	95.4	87.8	103	3.80	7.60	ISE Indirect
Cholesterol	mg/dl	140	122	158	9.00	18.0	Siemens Dimension
	mmol/l	3.63	3.16	4.10	0.235	0.470	
CK Total	U/l	180	148	212	16.0	32.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.44	1.15	1.73	0.145	0.290	Alkaline picrate no deproteinisation
	µmol/l	127	102	152	12.5	25.0	
	mg/dl	1.47	1.18	1.76	0.145	0.290	Jaffe Rate Blanked
	µmol/l	130	104	156	13.0	26.0	
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma glut'3-carb'4-nitro(IFCC)
	U/l	66	56	76	5.00	10.0	Siemens Dimension
Glucose	mg/dl	109	92.7	125	8.00	16.0	Hexokinase
	mmol/l	6.03	5.13	6.93	0.450	0.900	
HDL - Cholesterol	mg/dl	51.4	43.7	59.1	3.85	7.70	Direct HDL - PEGME
	mmol/l	1.33	1.13	1.53	0.100	0.200	
Iron	µg/dl	99.5	81.6	117	8.75	17.5	Colorimetric without ppt.
	µmol/l	17.8	14.6	21.0	1.60	3.20	
LD (LDH)	U/l	201	171	231	15.0	30.0	L to P - IFCC
Lipase	U/l	39	31	47	4.00	8.00	Colorimetric Dimension (LIP Kit)
Magnesium	mg/dl	2.17	1.91	2.43	0.130	0.260	Methylthymol Blue
	mmol/l	0.894	0.787	1.00	0.053	0.106	
Phosphate Inorganic	mg/dl	4.71	4.00	5.42	0.355	0.710	Phosphomolybdate UV
	mmol/l	1.52	1.29	1.75	0.115	0.230	
Potassium	mmol/l	4.06	3.74	4.38	0.160	0.320	ISE method - indirect
Protein Total	g/dl	5.74	4.59	6.89	0.575	1.15	Biuret reaction - end point
	g/l	57.4	45.9	68.9	5.75	11.5	

Siemens Dimension EXL/200				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
Triglycerides	mg/dl	91.2	76.6	106	7.40	14.8	Lipase/GPO-PAP No Correction
	mmol/l	1.03	0.865	1.20	0.085	0.170	
Urea	mg/dl	46.6	39.6	53.6	3.50	7.00	Urease - kinetic
	mg/dl (BUN)	21.7	18.4	25.0	1.65	3.30	
	mmol/l	7.75	6.59	8.91	0.580	1.16	
Uric Acid (Urate)	mg/dl	5.73	4.99	6.47	0.370	0.740	Uricase @ 293 nm
	mmol/l	0.341	0.297	0.385	0.022	0.044	
	µmol/l	341	297	385	22.0	44.0	

Siemens Dimension RxL/Max/Xpand					Human Assayed Multi-Sera - Level 2		
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Bilirubin Total	mg/dl	1.67	1.32	2.02	0.175	0.350	Diazo With Sulphanilic Acid
	μmol/l	28.6	22.6	34.6	3.00	6.00	

Thermo Fisher Sci / Binding Site Konelab 20/30/60/Indiko					Human Assayed Multi-Sera - Level 2		
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml		Range					
Analyte	Unit	Target	Low	High	1SD	2SD	Method
Albumin	g/dl	3.75	3.19	4.31	0.280	0.560	Bromocresol Green
	g/l	37.5	31.9	43.1	2.80	5.60	
Alkaline Phosphatase	U/l	190	162	218	14.0	28.0	AMP optimised to IFCC
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris Buffer Without P5P
Calcium	mg/dl	8.50	7.65	9.35	0.425	0.850	Arsenazo III
	mmol/l	2.12	1.91	2.33	0.105	0.210	
Cholesterol	mg/dl	169	147	191	11.0	22.0	Cholesterol Oxidase - Abell Kendall
	mmol/l	4.37	3.80	4.94	0.285	0.570	
CK Total	U/l	208	171	245	18.5	37.0	CK-NAC (IFCC)
Creatinine	mg/dl	1.38	1.10	1.66	0.140	0.280	Enzymatic
	µmol/l	122	97.6	146	12.0	24.0	
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glut'3-carb'4-nitro(IFCC)
Glucose	mg/dl	110	93.5	127	8.50	17.0	Glucose Oxidase
	mmol/l	6.13	5.21	7.05	0.460	0.920	
Iron	µg/dl	121	99.2	143	11.0	22.0	Colorimetric without ppt.
	µmol/l	21.6	17.7	25.5	1.95	3.90	
Magnesium	mg/dl	2.19	1.93	2.45	0.130	0.260	Xylidyl Blue
	mmol/l	0.903	0.795	1.01	0.054	0.107	
Phosphate Inorganic	mg/dl	4.59	3.90	5.28	0.345	0.690	Phosphomolybdate UV
	mmol/l	1.48	1.26	1.70	0.110	0.220	
Potassium	mmol/l	3.96	3.64	4.28	0.160	0.320	Ion Selective Electrode Method
Protein Total	g/dl	5.87	4.70	7.04	0.585	1.17	Biuret reaction - end point
	g/l	58.7	47.0	70.4	5.85	11.7	
Sodium	mmol/l	140	133	147	3.50	7.00	Ion Selective Electrode Method
Triglycerides	mg/dl	98.2	82.5	114	7.90	15.8	Lipase/GPO-PAP No Correction
	mmol/l	1.11	0.932	1.29	0.090	0.180	
Urea	mg/dl	46.2	39.3	53.1	3.45	6.90	Urease - kinetic
	mg/dl (BUN)	21.5	18.3	24.7	1.60	3.20	
	mmol/l	7.69	6.54	8.84	0.575	1.15	

Vital Scientific Selectra Series				Human Assayed Multi-Sera - Level 2			
Lot. No: 1759UN Cat. No: HN1530 Expiry: 2028/12/28							
Size: 20 x 5 ml			Range				
Analyte	Unit	Target	Low	High	1SD	2SD	Method
ALT (GPT)	U/l	39	31	47	4.00	8.00	Tris Buffer Without P5P
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris Buffer Without P5P
Glucose	mg/dl	108	91.8	124	8.00	16.0	Glucose Oxidase
	mmol/l	6.00	5.10	6.90	0.450	0.900	
Urea	mg/dl	45.1	38.3	51.9	3.40	6.80	Urease - kinetic
	mg/dl (BUN)	21.0	17.9	24.1	1.55	3.10	
	mmol/l	7.50	6.38	8.62	0.560	1.12	