

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

**Nr kat.** HNI530 **GTIN:** 05055273203783 **Op:** 20 x 5 ml  
**Nr kat.** HS2611 **GTIN:** 05055273203813 **Op:** 5 x 5 ml  
**Nr Serii:** I308UN **Data ważn:** 2022-06-28

### CHARAKTERYSTYKA

Ten produkt przeznaczony jest do diagnostyki IN VITRO do kontroli jakości oznaczeń diagnostycznych. Metrykowana ludzka wieloparametrowa surowica kontrolna jest przeznaczona do badania dokładności.

### OPIS PRODUKTU

Metrykowana ludzka wieloparametrowa surowica kontrolna jest dostępna na dwóch poziomach, poziom 2 (dla wartości prawidłowych) i poziom 3 (dla wartości podwyższonych). W ulotkach podane są wartości docelowe i zakresy pomiarowe (+/- 2 SD) dla parametrów wymienionych w specyfikacji dla obu poziomów.

### OSTRZEŻENIE

Tylko do diagnostyki IN VITRO. Nie pipetować ustami. Zachować standardowe procedury dotyczące odczynników, stosowanych w laboratorium.

Ludzkie surowice pochodzą od dawców przebadanych testami zaakceptowanymi przez FDA na obecność przeciwciał anti-HIV1 i anti-HIV 2, HBs Ag oraz przeciwciał anti-HCV. Testy te dały wyniki ujemne.

Niemniej jednak nieznaną jest metoda pozwalająca z całą pewnością wykluczyć obecność czynnika zakaźnego i dlatego materiał ten jak i próbki pobrane od pacjentów należy traktować jako potencjalnie zakaźny.

Karty charakterystyk substancji niebezpiecznych dostępne na życzenie.

### PRZECHOWYWANIE I TRWAŁOŚĆ

**OTWARTE::** Przechowywać w lodówce (+2°C do +8°C). Po rekonstytucji surowica jest trwała 8 godzin w temp. od +15°C do +25°C lub 7 dni w temp. od +2°C do +8°C i 28 dni przy jednorazowym zamrożeniu w temp. -18°C do -24°C. (patrz ograniczenia).

**NIEOTWIERANE:** Przechowywać w lodówce (+2°C do +8°C). Surowica jest trwała do daty ważności, która umieszczona jest zarówno na opakowaniu, jak i na każdej buteleczce.

### OGRANICZENIA

W przypadku kwaśnej fosfatazy całkowitej i sterczowej materiał powinien być stabilizowany przez dodanie 1 kropli (25-30 µl) 0,7 M kwasu octowego do 1 ml surowicy dokładnie 30 min. po rekonstytucji. Po stabilizacji fosfataza kwaśna całkowita i sterczowa są trwałe co najmniej 2 godziny w temp. +15°C do +25°C, 2 dni w temp. od +2 do +8°C i jeden miesiąc przy jednorazowym zamrożeniu w temp. -18°C do -24°C.

Aktywność fosfatazy zasadowej w rekonstruowanej surowicy będzie wzrastać w trakcie okresu trwałości. Zaleca się, aby przed oznaczaniem odstawić rekonstruowaną surowicę na 1 godzinę w temperaturze +15°C do +25°C.

Bilirubina w surowicy jest bardzo wrażliwa na bezpośrednie działanie światła, dlatego zaleca się przechowywanie jej w miejscu zaciemnionym. Przechowywana w tych warunkach jest trwała 4 dni w temp. od +2°C do +8°C.

Nie przechowywać w temp. od +15 do +25°C. **Nie zamrażać.**

NEFA jest stabilne 1 dzień w temp. od +2°C do +8°C

Całkowite PSA jest stabilne 4 dni w temp. +2 do +8°C lub 28 dni w temp. -18°C do -24°C.

Zanieczyszczenie bakteryjne rekonstruowanej surowicy wpływa na spadek stabilności wielu komponentów.

Materiału o różnych numerach serii nie wolno mieszać, ponieważ oznaczone wartości surowicy są zmienne z serii na serię.

Nie należy używać surowicy kontrolnej jako materiału do kalibracji testu.

### PRZYGOTOWANIE DO UŻYTKU

Metrykowana ludzka wieloparametrowa surowica kontrolna jest materiałem liofilizowanym.

- Ostrożnie rekonstruować każdą fiolkę liofilizowanej surowicy dokładnie odmierzając 5 ml destylowanej wody o temp. od +15°C do +25°C. Zamknąć buteleczkę, i pozostawić na 30 minut przed użyciem. Obracając delikatnie buteleczką, upewnić się czy materiał całkowicie się rozpuścił. Unikać spienienia. Nie potrząsać.
- Wartości dla różnych analizatorów podane są w ulotce.
- Pozostały materiał przechowywać w lodówce. Przed ponownym użyciem, dokładnie wymieszać.

**DOSTARCZONY MATERIAŁ**

Metrykowana ludzka wieloparametrowa surowica kontrolna.  
Numer kat. HNI530 / HS261 I 20x5ml / 5x5ml Poziom 2 (wartości normalne)

**POTRZEBNE MATERIAŁY, LECZ NIEDOSTARCZONE**

Kalibrowana pipeta.

**METRYKOWANIE**

Każda seria surowicy kontrolnej jest dostarczana do referencyjnych laboratoriów dla oceny w oparciu o międzynarodowe Referencyjne Standardy. Jeżeli międzynarodowe Referencyjne Standardy są nieosiągalne, używa się metod Referencyjnych. Wartości również są oznaczane w około 3000 laboratoriach na całym świecie, a następnie wyznacza się wartość właściwą z zastosowaniem unikalnych statystycznych analiz.

Dla poszczególnego numeru serii, zakres kontroli jest wyznaczany dla każdego pojedynczego parametru i dla każdej metody danego parametru. Zakres surowicy kontrolnej odpowiada przypisanej średniej  $\pm 2$  S.D. Wyniki te w metrykowanej surowicy mają bardzo dokładne wartości, które mogą być używane przez laboratoria w celu zapewnienia dokładności ich metod.

Jeżeli brak w ulotce wartości parametru dla danego analizatora, należy się odnieść do sekcji Mean of All Instruments (Średnia ze wszystkich analizatorów) . Jeśli zachodzi konieczność prosimy się kontaktować z przedstawicielem handlowym lub bezpośrednio obsługą techniczną firmy Randox w Irlandii Północnej pod nr tel.: +44 (0) 28 9445 1070 lub email [Technical.Services@randox.com](mailto:Technical.Services@randox.com) (język angielski).

**NOTES**

® Wszystkie znaki towarowe uznane.

- (1) Dotyczy wyłącznie Niemiec. Zakresy ustanowione zgodnie z Wytycznymi Federalnej Izby Lekarskiej w Niemczech.
- (2) Wartości ustanowione przez laboratoria referencyjne oficjalnie uznawane przez Federalną Izbę Lekarską w Niemczech.
- (3) DGKC: Niemieckie Towarzystwo Chemii Klinicznej.
- (4) IFCC: Międzynarodowa Federacja Chemii Klinicznej.
- (5) SCE: Skandynawski Komitet d/s Enzymów.

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	44.1	37.5	50.7	3.30	6.60	Bromocresol Purple
	g/dl	4.41	3.75	5.07	0.33	0.66	
Alkaline Phosphatase	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	177	150	204	13.50	27.00	AMP non-optimised 37°C
	U/l	165	140	190	12.50	25.00	Colorimetric 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	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	103	88	118	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	98	83	113	7.50	15.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.7	11.7	17.7	1.50	3.00	Colorimetric
	mmol/l	15.0	11.9	18.1	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.5	15.4	23.6	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.14	0.901	1.38	0.12	0.24	
	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	19.7	15.6	23.8	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.15	0.913	1.39	0.12	0.24	
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.65	1.30	2.00	0.18	0.35	

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Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	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	28.3	22.3	34.3	3.00	6.00	Nitrobenzenediazonium salt
	mg/dl	1.66	1.30	2.02	0.18	0.36	
	µmol/l	28.3	22.3	34.3	3.00	6.00	Diazonium ion
	mg/dl	1.66	1.30	2.02	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	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	96.9	89.2	105	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.19	3.65	4.73	0.27	0.54	Cholesterol Oxidase
	mg/dl	162	141	183	10.50	21.00	
	mmol/l	4.27	3.72	4.82	0.28	0.55	Cholesterol Dehydrogenase
	mg/dl	165	144	186	10.50	21.00	
Cholinesterase	U/l	5769	4615	6923	577.00	1154.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	168	240	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	203	167	239	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	200	164	236	18.00	36.00	Monothioglycerol 37°C
	U/l	190	156	224	17.00	34.00	Creatinine phosphate substrate Start 37°C
Copper	µmol/l	12.6	10.1	15.1	1.25	2.50	Colorimetric
	µg/dl	80.1	64.2	96.0	7.95	15.90	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	121	96.6	145	12.20	24.40	Enzymatic UV method
	mg/dl	1.37	1.09	1.65	0.14	0.28	
µmol/l	128	102	154	13.00	26.00	Jaffe rate blanked	
mg/dl	1.45	1.15	1.75	0.15	0.30		
Free T4	µmol/l	130	104	156	13.00	26.00	IDMS traceable
	mg/dl	1.47	1.18	1.76	0.15	0.29	
Free T4	pmol/l	17.2	12.9	21.5	2.15	4.30	Abbott Architect
	ng/dl	1.34	1.01	1.67	0.17	0.33	
	pg/ml	13.4	10.1	16.7	1.65	3.30	Abbott Architect
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.30	5.35	7.25	0.48	0.95	Hexokinase
	mg/dl	114	96.4	132	8.80	17.60	
	mmol/l	6.43	5.46	7.40	0.49	0.97	Glucose oxidase
	mg/dl	116	98.4	134	8.80	17.60	
HDL - Cholesterol	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL PPD
	mg/dl	55.2	46.7	63.7	4.25	8.50	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct Clearance Method
	mg/dl	56.0	47.5	64.5	4.25	8.50	

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Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
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	19.0	15.6	22.4	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	87.2	125	9.40	18.80	
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
LD (LDH)	U/l	203	172	234	15.50	31.00	L->P 37°C
	U/l	202	171	233	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	34	28	40	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	0.98	0.86	1.10	0.06	0.12	Spectrophotometric
	mg/dl	0.682	0.600	0.764	0.04	0.08	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	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	0.86	0.76	0.96	0.05	0.10	Enzymatic
	mg/dl	2.08	1.83	2.33	0.13	0.25	
Osmolality	mOsm/kg	305	244	366	30.50	61.00	Calculated
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	1.44	1.22	1.66	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.46	3.78	5.14	0.34	0.68	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
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	
	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction kinetic
	g/dl	5.92	4.73	7.11	0.60	1.19	
PSA Total	ng/ml =	10.2	7.66	12.7	1.27	2.54	Abbott Architect
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	0.98	0.79	1.18	0.10	0.20	Abbott Architect
TIBC	µmol/l	36.4	28.7	44.1	3.85	7.70	FE+UIBC(saturation with iron)
	µg/dl	203	160	246	21.50	43.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	91.2	76.9	106	7.15	14.30	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
	mmol/l	1.08	0.91	1.25	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	95.6	80.3	111	7.65	15.30	
UIBC	µmol/l	17.1	14.0	20.2	1.55	3.10	Direct Colorimetric
	µg/dl	95.6	78.3	113	8.65	17.30	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease end point
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease kinetic
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.62	6.48	8.76	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	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	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.03	5.24	6.82	0.40	0.79	
Zinc	µmol/l	19.3	15.4	23.2	1.95	3.90	Colorimetric with deproteinisation
	µg/dl	126	101	151	12.50	25.00	



## ABX Pentra 400®

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	47	38	56	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	20.1	15.8	24.4	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.18	0.924	1.44	0.13	0.26	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.62	1.28	1.96	0.17	0.34	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Chloride	mmol/l	96.1	88.4	104	3.85	7.70	ISE direct
Cholesterol	mmol/l	4.27	3.71	4.83	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	143	187	11.00	22.00	
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	135	108	162	13.50	27.00	Jaffe rate blanked
	mg/dl	1.53	1.22	1.84	0.16	0.31	
gamma-GT	U/l	57	49	65	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	

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Glucose	mmol/l	6.47	5.50	7.44	0.49	0.97	Glucose oxidase
	mg/dl	117	99.1	135	8.95	17.90	
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PPD
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	17.2	14.1	20.3	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.1	78.8	113	8.65	17.30	
LD (LDH)	U/l	389	331	447	29.00	58.00	P->L German methods 37°C
	U/l	211	179	243	16.00	32.00	L->P IFCC 37°C
Lipase	U/l	27	21	33	3.00	6.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.87	0.76	0.97	0.05	0.11	Xylidyl Blue
	mg/dl	2.11	1.85	2.37	0.13	0.26	
Phosphate Inorganic	mmol/l	1.57	1.34	1.80	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.87	4.15	5.59	0.36	0.72	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - direct
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	143	136	150	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	85.0	117	8.00	16.00	
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	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	

**ABX Pentra 400®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
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	

## Beckman Coulter AU Series®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	U/l	209	178	240	15.50	31.00	Diethanolamine buffer DEA 37°C
	U/l	212	181	243	15.50	31.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Colorimetric 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	65	56	74	4.50	9.00	Immuno-inhibition EPS substrate 37°C
	U/l	65	56	74	4.50	9.00	Roche EPS Liquid 37°C
	U/l	71	60	82	5.50	11.00	Beckman Synchron/CX/LXi/DxC 37°C
Amylase Total	U/l	84	72	96	6.00	12.00	pNP Maltotriose substrates 37°C
	U/l	89	76	102	6.50	13.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	91	77	105	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	87	74	100	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Colorimetric 37°C
	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.883	1.36	0.12	0.24	

## Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	19.2	15.2	23.2	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.12	0.889	1.35	0.12	0.23	
	µmol/l	18.5	14.6	22.4	1.95	3.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.08	0.854	1.31	0.11	0.23	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.35	2.05	0.18	0.35	
	µmol/l	29.2	23.0	35.4	3.10	6.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazonium ion
	mg/dl	1.70	1.34	2.06	0.18	0.36	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	29.3	23.2	35.4	3.05	6.10	DPD (Beckman AU)
	mg/dl	1.71	1.36	2.06	0.18	0.35	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	Colorimetric
	mmol/l	95.4	87.7	103	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.25	3.70	4.80	0.28	0.55	Cholesterol Oxidase
	mg/dl	164	143	185	10.50	21.00	

## Beckman Coulter AU Series®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholinesterase	U/l	4706	3765	5647	470.50	941.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	121	96.6	145	12.20	24.40	Alkaline picrate with deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Enzymatic UV method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	125	99.8	150	12.60	25.20	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	99.2	149	12.40	24.80	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	116	92.9	139	11.55	23.10	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.31	1.05	1.57	0.13	0.26	
µmol/l	119	95.5	143	11.75	23.50	IDMS traceable	
mg/dl	1.34	1.08	1.60	0.13	0.26		
D-3-Hydroxybutyrate	mmol/l	0.30	0.26	0.35	0.02	0.05	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	58	49	67	4.50	9.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	57	49	65	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
GLDH	U/l	18	15	21	1.50	3.00	Triethanolamine buffer 50 mmol 37°C

## Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.66	5.66	7.66	0.50	1.00	GOD/02-Beckman method
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	6.32	5.37	7.27	0.48	0.95	Glucose dehydrogenase
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	6.43	5.47	7.39	0.48	0.96	Hexokinase
	mg/dl	116	98.6	133	8.70	17.40	
	mmol/l	6.51	5.53	7.49	0.49	0.98	Glucose oxidase
	mg/dl	117	99.7	134	8.65	17.30	
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL PPD
	mg/dl	56.0	47.5	64.5	4.25	8.50	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct Clearance Method
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL Roche 3rd generation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.49	1.27	1.71	0.11	0.22	HDL - Ultra
	mg/dl	57.5	49.0	66.0	4.25	8.50	
Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	
	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P 37°C

## Beckman Coulter AU Series®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	405	345	465	30.00	60.00	P->L German methods 37°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
	U/l	205	174	236	15.50	31.00	L to P Beckman (Extinction Coeff) 37°C
Lipase	U/l	33	27	39	3.00	6.00	Other Colorimetric 37°C
Lithium	mmol/l	1.00	0.88	1.12	0.06	0.12	Spectrophotometric
	mg/dl	0.694	0.611	0.777	0.04	0.08	
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	
	mmol/l	0.93	0.81	1.04	0.06	0.11	Methylthymol blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.45	1.24	1.66	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.50	3.84	5.16	0.33	0.66	
	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	
	mmol/l	1.46	1.24	1.68	0.11	0.22	Beckman PHOSm (365nm)
	mg/dl	4.53	3.84	5.22	0.35	0.69	
Potassium	mmol/l	3.96	3.65	4.27	0.16	0.31	ISE method - indirect
Protein Total	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction end point
	g/dl	5.77	4.62	6.92	0.58	1.15	
	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	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	38.9	30.7	47.1	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	217	172	262	22.50	45.00	



## Beckman Coulter AU Series®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	39.1	30.9	47.3	4.10	8.20	Direct Colorimetric
	µg/dl	219	173	265	23.00	46.00	
	µmol/l	36.0	28.4	43.6	3.80	7.60	Calculated from Transferrin
	µg/dl	201	159	243	21.00	42.00	
Total T4	nmol/l	97.6	73.2	122	12.20	24.40	Microgenics DRI assay
	µg/dl	7.61	5.71	9.51	0.95	1.90	
	ng/ml	76.1	57.1	95.1	9.50	19.00	Microgenics DRI assay
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.1	115	8.00	16.00	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.10	0.93	1.27	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	96.5	81.2	112	7.65	15.30	
mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/Glycerol Dehydrogenase	
mg/dl	97.4	81.8	113	7.80	15.60		
UIBC	µmol/l	21.0	17.2	24.8	1.90	3.80	Direct Colorimetric
	µg/dl	117	96.1	138	10.45	20.90	
Urea	mmol/l	7.82	6.65	8.99	0.59	1.17	Beckman-Conductivity
	mg/dl	47.0	40.0	54.0	3.50	7.00	
	mmol/l	7.85	6.67	9.03	0.59	1.18	Urease end point
	mg/dl	47.2	40.1	54.3	3.55	7.10	
	mmol/l	7.77	6.61	8.93	0.58	1.16	Urease kinetic
	mg/dl	46.7	39.7	53.7	3.50	7.00	

## Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	8.01	6.81	9.21	0.60	1.20	Urease hypochlorite
	mg/dl	48.1	40.9	55.3	3.60	7.20	
	mmol/l	7.77	6.60	8.94	0.59	1.17	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.17	5.36	6.98	0.41	0.81	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.17	5.36	6.98	0.41	0.81	

## Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	45.3	38.5	52.1	3.40	6.80	Bromocresol Green
	g/dl	4.53	3.85	5.21	0.34	0.68	
	g/l	45.6	38.7	52.5	3.45	6.90	Bromocresol Purple
	g/dl	4.56	3.87	5.25	0.35	0.69	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	182	155	209	13.50	27.00	AMP non-optimised 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	42	33	51	4.50	9.00	Tris buffer SCE 37°C
	U/l	41	33	49	4.00	8.00	Beckman (Extinction Coefficient) 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	93	79	107	7.00	14.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 37°C
	U/l	34	27	41	3.50	7.00	Tris buffer SCE 37°C
	U/l	33	26	40	3.50	7.00	Beckman (Extinction Coefficient) 37°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Differential rate pH change
	mmol/l	15.2	12.1	18.3	1.55	3.10	Ion selective electrode
Bilirubin Direct	µmol/l	12.6	9.96	15.2	1.32	2.64	Diazo with Sulphanilic Acid
	mg/dl	0.737	0.583	0.891	0.08	0.15	
Bilirubin Total	µmol/l	30.4	24.0	36.8	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.40	2.16	0.19	0.38	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Ion selective electrode
	mg/dl	8.38	7.54	9.22	0.42	0.84	


**Beckman CX4/5/7/9/LX20®/DxC600/800®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	1.99	1.79	2.19	0.10	0.20	Arsenazo III
	mg/dl	7.98	7.17	8.79	0.41	0.81	
Chloride	mmol/l	95.5	87.9	103	3.80	7.60	ISE indirect
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase
	mg/dl	156	136	176	10.00	20.00	
Cholinesterase	U/l	4927	3941	5913	493.00	986.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	202	165	239	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	207	170	244	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	209	171	247	19.00	38.00	Monothioglycerol 37°C
	U/l	206	169	243	18.50	37.00	Beckman CK-NAC (Extinction Coeff) 37°C
Creatinine	µmol/l	120	96.0	144	12.00	24.00	Alkaline picrate no deproteinization
	mg/dl	1.36	1.08	1.64	0.14	0.28	
	µmol/l	118	94.3	142	11.85	23.70	Enzymatic UV method
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	120	95.6	144	12.20	24.40	Jaffe rate blanked
	mg/dl	1.36	1.08	1.64	0.14	0.28	
µmol/l	121	96.6	145	12.20	24.40	IDMS traceable	
mg/dl	1.37	1.09	1.65	0.14	0.28		
Free T4	pmol/l	18.5	13.9	23.1	2.30	4.60	Beckman Dxl800
	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 Dxl800
gamma-GT	U/l	45	38	52	3.50	7.00	Gamma glutamyl-.3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

## Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	6.11	5.20	7.02	0.46	0.91	GOD/02-Beckman method	
	mg/dl	110	93.7	126	8.15	16.30		
	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase	
	mg/dl	112	95.0	129	8.50	17.00		
	mmol/l	6.22	5.29	7.15	0.47	0.93	Oxygen electrode	
	mg/dl	112	95.3	129	8.35	16.70		
	mmol/l	6.24	5.31	7.17	0.47	0.93	Glucose oxidase	
	mg/dl	112	95.7	128	8.15	16.30		
	HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PPD
		mg/dl	56.7	48.3	65.1	4.20	8.40	
mmol/l		1.42	1.21	1.63	0.11	0.21	Direct Clearance Method	
mg/dl		54.8	46.7	62.9	4.05	8.10		
mmol/l		1.47	1.25	1.69	0.11	0.22	HDL - Ultra	
mg/dl		56.7	48.3	65.1	4.20	8.40		
Iron		µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric with ppt.
		µg/dl	98.4	80.5	116	8.95	17.90	
	µmol/l	17.2	14.1	20.3	1.55	3.10	Colorimetric without ppt.	
	µg/dl	96.1	78.8	113	8.65	17.30		
Lactate	mmol/l	1.47	1.20	1.74	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.2	10.8	15.6	1.20	2.40		
LD (LDH)	U/l	169	143	195	13.00	26.00	L->P 37°C	
	U/l	542	461	623	40.50	81.00	Pyruvate 1.4 mM - Beckman LD-P 37°C	
	U/l	248	211	285	18.50	37.00	L->P IFCC 37°C	
	U/l	166	141	191	12.50	25.00	L to P Beckman (Extinction Coeff) 37°C	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Calmagite	
	mg/dl	2.14	1.89	2.39	0.13	0.25		

## Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Osmolality	mOsm/kg	299	239	359	30.00	60.00	Calculated
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	3.88	3.57	4.19	0.16	0.31	ISE method - indirect
Protein Total	g/l	58.0	46.4	69.6	5.80	11.60	Biuret reaction CX4/5/7
	g/dl	5.80	4.64	6.96	0.58	1.16	
	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	
	g/l	56.7	45.4	68.0	5.65	11.30	Biuret reaction kinetic
	g/dl	5.67	4.54	6.80	0.57	1.13	
PSA Total	ng/ml =	11.7	8.78	14.6	1.46	2.92	Beckman DXI standardised to Hybritech
Sodium	mmol/l	142	135	149	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.09	0.88	1.31	0.11	0.22	Beckman Dxl800 Hyper TSH
	µU/ml =	1.08	0.87	1.29	0.11	0.21	Beckman Dxl 600/800 Access (3rd IS)
TIBC	µmol/l	34.7	27.4	42.0	3.65	7.30	Removal of excess free iron
	µg/dl	194	153	235	20.50	41.00	
	µmol/l	39.7	31.4	48.0	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	222	176	268	23.00	46.00	
Total T3	nmol/l	2.75	2.07	3.43	0.34	0.68	Beckman Dxl800
	ng/ml	1.79	1.35	2.23	0.22	0.44	
	ng/dl	179	135	223	22.00	44.00	Beckman Dxl800
Total T4	nmol/l	84.9	63.7	106	10.60	21.20	Beckman Dxl800
	µg/dl	6.62	4.97	8.27	0.83	1.65	
	ng/ml	66.2	49.7	82.7	8.25	16.50	Beckman Dxl800

## Beckman CX4/5/7/9/LX20®/DxC600/800®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.19	1.00	1.38	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	105	88.1	122	8.45	16.90	
	mmol/l	1.18	0.99	1.37	0.09	0.19	L/G Kinase EP. no correction
	mg/dl	104	88.0	120	8.00	16.00	
Urea	mmol/l	7.45	6.33	8.57	0.56	1.12	Beckman-Conductivity
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.86	6.68	9.04	0.59	1.18	Urease kinetic
	mg/dl	47.2	40.1	54.3	3.55	7.10	
	mmol/l	7.86	6.68	9.04	0.59	1.18	BUN
	mg/dl	22.1	18.8	25.4	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	

## BIOSYSTEMS A15

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	114	96	132	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	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
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	4.17	3.62	4.72	0.28	0.55	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	132	108	156	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	125	99.8	150	12.60	25.20	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	



## BIOSYSTEMS A15

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.34	5.39	7.29	0.48	0.95	Glucose oxidase
	mg/dl	114	97.1	131	8.45	16.90	
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
Triglycerides	mmol/l	1.07	0.90	1.24	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
Urea	mmol/l	7.76	6.60	8.92	0.58	1.16	Urease end point
	mg/dl	46.6	39.7	53.5	3.45	6.90	
	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	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	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.20	5.39	7.01	0.41	0.81	
	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
mg/dl	6.10	5.31	6.89	0.40	0.79		

## BIOSYSTEMS A25

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Green
	g/dl	4.28	3.64	4.92	0.32	0.64	
Alkaline Phosphatase	U/l	178	152	204	13.00	26.00	AMP optimised to IFCC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	114	97	131	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	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
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	
Cholesterol	mmol/l	4.22	3.67	4.77	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	135	111	159	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	92	75	109	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	122	97.7	146	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
gamma-GT	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	37	51	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	29	41	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

## BIOSYSTEMS A25

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.58	5.60	7.56	0.49	0.98	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	
HDL - Cholesterol	mmol/l	1.49	1.27	1.71	0.11	0.22	Direct HDL PPD
	mg/dl	57.5	49.0	66.0	4.25	8.50	
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	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
Urea	mmol/l	7.44	6.32	8.56	0.56	1.12	Urease end point
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.42	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.25	5.43	7.07	0.41	0.82	
	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase peroxidase no ascorbate oxidase
mg/dl	6.32	5.49	7.15	0.42	0.83		

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

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	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	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	13.9	11.0	16.8	1.45	2.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	0.813	0.644	0.982	0.08	0.17	
	µmol/l	18.8	14.9	22.7	1.95	3.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.10	0.872	1.33	0.11	0.23	
Bilirubin Total	µmol/l	28.8	22.8	34.8	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	23.0	18.1	27.9	2.45	4.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.35	1.06	1.64	0.15	0.29	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.42	0.84	

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	2.24	2.01	2.47	0.12	0.23	Arsenazo III
	mg/dl	8.98	8.06	9.90	0.46	0.92	
Chloride	mmol/l	98.7	90.8	107	3.95	7.90	Colorimetric
Cholesterol	mmol/l	4.29	3.73	4.85	0.28	0.56	Cholesterol Oxidase
	mg/dl	166	144	188	11.00	22.00	
Cholinesterase	U/l	4780	3824	5736	478.00	956.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	131	104	158	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.18	1.78	0.15	0.30	
	µmol/l	131	104	158	13.50	27.00	Jaffe rate blanked
	mg/dl	1.48	1.18	1.78	0.15	0.30	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.37	5.42	7.32	0.48	0.95	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
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	391	332	450	29.50	59.00	P->L Scandinavian & Dutch 37°C
	U/l	282	240	324	21.00	42.00	P->L Scandinavian & Dutch 30°C
	U/l	198	168	228	15.00	30.00	P->L Scandinavian & Dutch 25°C

## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	406	345	467	30.50	61.00	P->L SFBC 37°C
	U/l	293	249	337	22.00	44.00	P->L SFBC 30°C
	U/l	206	175	237	15.50	31.00	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	1.56	1.33	1.79	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.84	4.12	5.56	0.36	0.72	
Potassium	mmol/l	3.85	3.54	4.16	0.16	0.31	ISE method - indirect
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	ISE method - indirect
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
Urea	mmol/l	7.89	6.71	9.07	0.59	1.18	Urease kinetic
	mg/dl	47.4	40.3	54.5	3.55	7.10	
	mmol/l	7.89	6.71	9.07	0.59	1.18	BUN
	mg/dl	22.1	18.8	25.4	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	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	

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**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	5.70	4.96	6.44	0.37	0.74	

## COBAS INTEGRA®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	45.1	38.3	51.9	3.40	6.80	Bromocresol Green
	g/dl	4.51	3.83	5.19	0.34	0.68	
	g/l	45.3	38.5	52.1	3.40	6.80	Bromocresol Purple
	g/dl	4.53	3.85	5.21	0.34	0.68	
	g/l	43.4	36.9	49.9	3.25	6.50	Turbidimetric Assays
	g/dl	4.34	3.69	4.99	0.33	0.65	
Alkaline Phosphatase	U/l	164	139	189	12.50	25.00	Roche Integra AMP buffer 37°C
	U/l	128	108	148	10.00	20.00	Roche Integra AMP buffer 30°C
	U/l	105	89	121	8.00	16.00	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
	U/l	161	136	186	12.50	25.00	Colorimetric 37°C
	U/l	125	106	144	9.50	19.00	Colorimetric 30°C
	U/l	103	87	119	8.00	16.00	Colorimetric 25°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	71	60	82	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	90	76	104	7.00	14.00	Roche liquid stable pNPG7 37°C



## COBAS INTEGRA®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	17.5	13.9	21.1	1.80	3.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.02	0.813	1.23	0.10	0.21	
	µmol/l	17.7	14.0	21.4	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.04	0.819	1.26	0.11	0.22	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Roche JG factored
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	17.1	13.5	20.7	1.80	3.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.00	0.790	1.21	0.11	0.21	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	µmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	mmol/l	2.13	1.92	2.34	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.14	1.93	2.35	0.11	0.21	NM-BAPTA
mg/dl	8.58	7.74	9.42	0.42	0.84		


**COBAS INTEGRA®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	96.4	88.7	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
CK Total	U/l	181	148	214	16.50	33.00	CK-NAC serum start (DGKC) 37°C
	U/l	113	93	133	10.00	20.00	CK-NAC serum start (DGKC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC serum start (DGKC) 25°C
	U/l	202	165	239	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	70	102	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	123	98.1	148	12.45	24.90	Alkaline picrate with deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.7	146	12.15	24.30	Alkaline picrate no deproteinization
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	123	98.7	147	12.15	24.30	Enzymatic UV method
	mg/dl	1.39	1.12	1.66	0.14	0.27	
	µmol/l	123	98.3	148	12.35	24.70	Roche Creatinine Plus
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.3	147	12.35	24.70	Jaffe rate blanked
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	122	97.9	146	12.05	24.10	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.38	1.11	1.65	0.14	0.27	

## COBAS INTEGRA®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	123	98.8	147	12.10	24.20	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.39	1.12	1.66	0.14	0.27	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	45	38	52	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	95.7	130	8.65	17.30	
	mmol/l	6.45	5.48	7.42	0.49	0.97	Hexokinase
	mg/dl	116	98.7	133	8.65	17.30	
	mmol/l	6.47	5.50	7.44	0.49	0.97	Glucose oxidase
	mg/dl	117	99.1	135	8.95	17.90	
HDL - Cholesterol	mmol/l	1.56	1.32	1.80	0.12	0.24	Direct HDL Roche 3rd generation
	mg/dl	60.2	51.0	69.4	4.60	9.20	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	85.0	121	9.00	18.00	
	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	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P 37°C
	U/l	153	130	176	11.50	23.00	L->P 30°C
	U/l	107	91	123	8.00	16.00	L->P 25°C

## COBAS INTEGRA®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	387	329	445	29.00	58.00	P->L German methods 37°C
	U/l	279	238	320	20.50	41.00	P->L German methods 30°C
	U/l	196	167	225	14.50	29.00	P->L German methods 25°C
	U/l	217	184	250	16.50	33.00	L->P IFCC 37°C
	U/l	157	133	181	12.00	24.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
	U/l	32	26	38	3.00	6.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	0.98	0.87	1.10	0.06	0.12	Ion selective electrode
	mg/dl	0.683	0.601	0.765	0.04	0.08	
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.29	2.01	2.57	0.14	0.28	
	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	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.71	4.00	5.42	0.36	0.71	
Potassium	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.2	44.2	66.2	5.50	11.00	Biuret reaction end point
	g/dl	5.52	4.42	6.62	0.55	1.10	
	g/l	54.3	43.5	65.1	5.40	10.80	Biuret reaction kinetic
	g/dl	5.43	4.35	6.51	0.54	1.08	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	35.6	28.1	43.1	3.75	7.50	FE+UIBC(saturation with iron)
	µg/dl	199	157	241	21.00	42.00	

## COBAS INTEGRA®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.14	0.95	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.4	118	8.30	16.60	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.5	115	7.80	15.60	
	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.8	118	8.10	16.20	
	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	101	84.8	117	8.10	16.20	
Urea	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	101	84.5	118	8.25	16.50	
	mmol/l	7.27	6.18	8.36	0.55	1.09	Urease end point
	mg/dl	43.7	37.1	50.3	3.30	6.60	
	mmol/l	7.35	6.25	8.45	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.35	6.25	8.45	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.03	5.26	6.80	0.39	0.77	

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.8	37.2	50.4	3.30	6.60	Bromocresol Green
	g/dl	4.38	3.72	5.04	0.33	0.66	
Alkaline Phosphatase	U/l	253	215	291	19.00	38.00	Diethanolamine buffer DEA 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	15.0	11.8	18.2	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.878	0.690	1.07	0.09	0.19	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	201	164	238	18.50	37.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	118	94.6	141	11.70	23.40	Alkaline picrate no deproteinization
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	115	91.9	138	11.55	23.10	Enzymatic UV method
	mg/dl	1.30	1.04	1.56	0.13	0.26	
	µmol/l	112	89.5	135	11.25	22.50	Creatinine PAP method
	mg/dl	1.27	1.01	1.53	0.13	0.26	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.58	5.59	7.57	0.50	0.99	Glucose oxidase
	mg/dl	119	101	137	9.00	18.00	
HDL - Cholesterol	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.1	44.4	59.8	3.85	7.70	
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	1.59	1.35	1.83	0.12	0.24	Phosphomolybdate UV
	mg/dl	4.93	4.19	5.67	0.37	0.74	
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	
Triglycerides	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.4	121	8.30	16.60	
	mmol/l	1.20	1.01	1.39	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	106	89.4	123	8.30	16.60	
Urea	mmol/l	7.51	6.39	8.63	0.56	1.12	Urease kinetic
	mg/dl	45.1	38.4	51.8	3.35	6.70	
	mmol/l	7.51	6.38	8.64	0.57	1.13	BUN
	mg/dl	21.1	17.9	24.3	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	
	mmol/l	0.40	0.35	0.45	0.03	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.65	5.80	7.50	0.43	0.85	
Uric Acid (Urate)	mmol/l	0.38	0.33	0.43	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.32	5.49	7.15	0.42	0.83	

## HITACHI SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Acid Phosphatase (Total)	U/l	10.4	6.97	13.8	1.72	3.43	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	154	131	177	11.50	23.00	Roche Integra AMP buffer 37°C
	U/l	120	102	138	9.00	18.00	Roche Integra AMP buffer 30°C
	U/l	98	84	112	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
	U/l	203	173	233	15.00	30.00	Randox AMP 37°C
	U/l	158	135	181	11.50	23.00	Randox AMP 30°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
	U/l	77	65	89	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C



## HITACHI SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bile Acids	µmol/l	24.3	19.4	29.2	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.3	14.5	22.1	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.07	0.848	1.29	0.11	0.22	
	µmol/l	18.6	14.7	22.5	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.09	0.860	1.32	0.12	0.23	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	27.4	21.6	33.2	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	29.2	23.0	35.4	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
	µmol/l	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	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	
	mmol/l	2.24	2.01	2.47	0.12	0.23	Arsenazo III
	mg/dl	8.98	8.06	9.90	0.46	0.92	
Chloride	mmol/l	93.6	86.1	101	3.75	7.50	ISE indirect
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
Cholinesterase	U/l	4862	3889	5835	486.50	973.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	204	168	240	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C

## HITACHI SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	124	99.1	149	12.45	24.90	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	124	99.5	149	12.25	24.50	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	38	50	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	67	57	77	5.00	10.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	53	45	61	4.00	8.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	41	35	47	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Hexokinase
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	6.46	5.49	7.43	0.49	0.97	Glucose oxidase
	mg/dl	116	98.9	133	8.55	17.10	
HDL - Cholesterol	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	47.1	40.1	54.1	3.50	7.00	

## HITACHI SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.35	1.15	1.55	0.10	0.20	Direct Clearance Method
	mg/dl	52.1	44.4	59.8	3.85	7.70	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Direct HDL Roche 3rd generation
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
LD (LDH)	U/l	402	342	462	30.00	60.00	P->L German methods 37°C
	U/l	290	247	333	21.50	43.00	P->L German methods 30°C
	U/l	204	173	235	15.50	31.00	P->L German methods 25°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
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	4.04	3.72	4.36	0.16	0.32	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	146	138	154	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	

## HITACHI SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
	mmol/l	1.18	0.99	1.37	0.10	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	87.5	121	8.25	16.50	
Urea	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease end point
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	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	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	
	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	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

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	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
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
Amylase Total	U/l	90	77	103	6.50	13.00	I.L. 2-chloro-pNPG3 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
Bilirubin Direct	µmol/l	12.6	9.93	15.3	1.34	2.67	Diazo with Sulphanilic Acid
	mg/dl	0.737	0.581	0.893	0.08	0.16	
Bilirubin Total	µmol/l	30.5	24.1	36.9	3.20	6.40	Diazo with Sulphanilic Acid
	mg/dl	1.78	1.41	2.15	0.19	0.37	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.59	1.25	1.93	0.17	0.34	
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Chloride	mmol/l	93.0	85.5	101	3.75	7.50	ISE indirect

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Cholesterol	mmol/l	4.19	3.65	4.73	0.27	0.54	Cholesterol Oxidase
	mg/dl	162	141	183	10.50	21.00	
Cholinesterase	U/l	5068	4054	6082	507.00	1014.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	180	148	212	16.00	32.00	CK-NAC (IFCC) 37°C
	U/l	113	93	133	10.00	20.00	CK-NAC (IFCC) 30°C
	U/l	77	63	91	7.00	14.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	124	99.2	149	12.40	24.80	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	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	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	54	46	62	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	43	36	50	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.55	5.57	7.53	0.49	0.98	Hexokinase
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	6.48	5.51	7.45	0.49	0.97	Glucose oxidase
	mg/dl	117	99.3	135	8.85	17.70	
HDL - Cholesterol	mmol/l	1.29	1.10	1.48	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	49.8	42.5	57.1	3.65	7.30	
Iron	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	83.3	119	8.85	17.70	

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	400	340	460	30.00	60.00	P->L German methods 37°C
	U/l	289	245	333	22.00	44.00	P->L German methods 30°C
	U/l	203	172	234	15.50	31.00	P->L German methods 25°C
	U/l	418	355	481	31.50	63.00	P->L SFBC 37°C
	U/l	302	256	348	23.00	46.00	P->L SFBC 30°C
	U/l	212	180	244	16.00	32.00	P->L SFBC 25°C
Lipase	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
	mmol/l	0.93	0.82	1.05	0.06	0.11	Enzymatic
	mg/dl	2.27	2.00	2.54	0.14	0.27	
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	4.01	3.69	4.33	0.16	0.32	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	145	137	153	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	87.0	121	8.50	17.00	
	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	7.81	6.64	8.98	0.59	1.17	Urease kinetic
	mg/dl	46.9	39.9	53.9	3.50	7.00	
	mmol/l	7.81	6.64	8.98	0.59	1.17	BUN
	mg/dl	21.9	18.6	25.2	1.65	3.30	

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**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
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	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	



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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.6	35.4	47.8	3.10	6.20	Bromocresol Green
	g/dl	4.16	3.54	4.78	0.31	0.62	
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	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 30°C
	U/l	25	20	30	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 Direct	µmol/l	17.1	13.5	20.7	1.80	3.60	Diazo with Sulphanilic Acid
	mg/dl	1.00	0.790	1.21	0.11	0.21	
Bilirubin Total	µmol/l	24.0	19.0	29.0	2.50	5.00	Diazo with Sulphanilic Acid
	mg/dl	1.40	1.11	1.69	0.15	0.29	
	µmol/l	23.3	18.4	28.2	2.45	4.90	Nitrobenzenediazonium salt
	mg/dl	1.36	1.08	1.64	0.14	0.28	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Chloride	mmol/l	99.0	91.1	107	3.95	7.90	Colorimetric
	mmol/l	98.9	91.0	107	3.95	7.90	ISE direct

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	108	154	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	112	89.6	134	11.20	22.40	Jaffe rate blanked
	mg/dl	1.27	1.01	1.53	0.13	0.26	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	44	38	50	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.66	5.66	7.66	0.50	1.00	Hexokinase
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	6.50	5.52	7.48	0.49	0.98	Glucose oxidase
	mg/dl	117	99.5	135	8.75	17.50	
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL PPD
	mg/dl	56.0	47.5	64.5	4.25	8.50	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PEGME
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct Clearance Method
	mg/dl	53.7	45.5	61.9	4.10	8.20	
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	

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	442	376	508	33.00	66.00	P->L Scandinavian & Dutch 37°C
	U/l	319	271	367	24.00	48.00	P->L Scandinavian & Dutch 30°C
	U/l	224	191	257	16.50	33.00	P->L Scandinavian & Dutch 25°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.65	3.94	5.36	0.36	0.71	
Potassium	mmol/l	3.82	3.51	4.13	0.16	0.31	ISE method - direct
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	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.2	115	7.95	15.90	
Urea	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease end point
	mg/dl	45.8	38.9	52.7	3.45	6.90	
	mmol/l	7.65	6.51	8.79	0.57	1.14	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.65	6.50	8.80	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.12	5.31	6.93	0.41	0.81	
	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	0.38	0.33	0.43	0.03	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.42	5.58	7.26	0.42	0.84	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
alpha-HBDH	U/l	225	178	272	23.50	47.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	170	134	206	18.00	36.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	127	101	153	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
Acid Phosphatase (Total)	U/l	10.4	6.97	13.8	1.72	3.43	1-Naphthyl Phosphate substrate Kinetic 37°C
Albumin	g/l	42.6	36.2	49.0	3.20	6.40	Bromocresol Green
	g/dl	4.26	3.62	4.90	0.32	0.64	
	g/l	44.6	37.9	51.3	3.35	6.70	Bromocresol Purple
	g/dl	4.46	3.79	5.13	0.34	0.67	
	g/l	41.3	35.1	47.5	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.13	3.51	4.75	0.31	0.62	
	g/l	43.5	37.0	50.0	3.25	6.50	Turbidimetric Assays
Alkaline Phosphatase	g/dl	4.35	3.70	5.00	0.33	0.65	
	U/l	163	139	187	12.00	24.00	Ortho Vitros Microslide Systems 37°C
	U/l	246	209	283	18.50	37.00	Diethanolamine buffer DEA 37°C
	U/l	192	163	221	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	157	134	180	11.50	23.00	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	190	161	219	14.50	29.00	AMP non-optimised 37°C
	U/l	148	125	171	11.50	23.00	AMP non-optimised 30°C
U/l	121	103	139	9.00	18.00	AMP non-optimised 25°C	

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Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
ALT (GPT)	U/l	41	33	49	4.00	8.00	Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Colorimetric 30°C
	U/l	23	19	27	2.00	4.00	Colorimetric 25°C
	U/l	56	45	67	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	47	38	56	4.50	9.00	Tris buffer with P5P 37°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P 30°C
	U/l	26	21	31	2.50	5.00	Tris buffer with P5P 25°C
	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
	U/l	40	32	48	4.00	8.00	Phosphate buffer DGKC 37°C
	U/l	30	24	36	3.00	6.00	Phosphate buffer DGKC 30°C
	U/l	23	18	28	2.50	5.00	Phosphate buffer DGKC 25°C
	U/l	42	34	50	4.00	8.00	Tris buffer with P5P NVKC 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer with P5P NVKC 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P NVKC 25°C
Amylase Pancreatic	U/l	41	33	49	4.00	8.00	Tris buffer SCE 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer SCE 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer SCE 25°C
Amylase Total	U/l	70	60	80	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	69	58	80	5.50	11.00	Roche EPS Liquid 37°C
	U/l	77	65	89	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	pNP Maltotriose substrates 37°C
	U/l	89	76	102	6.50	13.00	Siemens - blocked pNPG7 37°C

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Amylase Total	U/l	73	62	84	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	98	83	113	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Synchron CX4/CX5/CX7 37°C
	U/l	96	81	111	7.50	15.00	Siemens - maltopenta/hexaoside 37°C
	U/l	86	73	99	6.50	13.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	89	75	103	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
	U/l	87	74	100	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	100	85	115	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
	U/l	87	74	100	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	90	76	104	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Beckman Synchron AMY7 37°C
	U/l	86	73	99	6.50	13.00	Agappe - CNPG3 37°C
	U/l	91	77	105	7.00	14.00	I.L. 2-chloro-pNPG3 37°C
	U/l	103	88	118	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	97	83	111	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	87	74	100	6.50	13.00	Beckman CNPG3 (Extinction Coeff) 37°C
U/l	88	75	101	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C	
Apolipoprotein A-1	g/l	1.03	0.85	1.22	0.09	0.19	Immunoturbidimetric
	mg/dl	103	84.5	122	9.25	18.50	
Apolipoprotein B	g/l	0.55	0.45	0.65	0.05	0.10	Immunoturbidimetric
	mg/dl	54.7	44.9	64.5	4.90	9.80	
AST (GOT)	U/l	35	28	42	3.50	7.00	Colorimetric 37°C
	U/l	24	19	29	2.50	5.00	Colorimetric 30°C
	U/l	17	13	21	2.00	4.00	Colorimetric 25°C

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
	U/l	54	43	65	5.50	11.00	Tris buffer with P5P 37°C
	U/l	37	29	45	4.00	8.00	Tris buffer with P5P 30°C
	U/l	26	20	32	3.00	6.00	Tris buffer with P5P 25°C
	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
	U/l	35	28	42	3.50	7.00	Phosphate buffer DGKC 37°C
	U/l	24	19	29	2.50	5.00	Phosphate buffer DGKC 30°C
	U/l	17	13	21	2.00	4.00	Phosphate buffer DGKC 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P NVKC 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P NVKC 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer with P5P NVKC 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C	
U/l	17	13	21	2.00	4.00	Tris buffer SCE 25°C	
Bicarbonate	mmol/l	15.0	11.9	18.1	1.55	3.10	Colorimetric
	mmol/l	16.3	12.9	19.7	1.70	3.40	Ortho Vitros Microslide Systems
	mmol/l	15.4	12.2	18.6	1.60	3.20	Differential rate pH change
	mmol/l	15.6	12.4	18.8	1.60	3.20	Enzymatic
	mmol/l	15.9	12.6	19.2	1.65	3.30	Ion selective electrode
Bile Acids	µmol/l	27.8	22.2	33.4	2.80	5.60	4th Generation Colorimetric
	µmol/l	24.7	19.8	29.6	2.45	4.90	5th Generation Colorimetric
Bilirubin Direct	µmol/l	18.9	15.0	22.8	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.11	0.878	1.34	0.12	0.23	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Direct	µmol/l	20.9	16.5	25.3	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.22	0.965	1.48	0.13	0.26	
	µmol/l	19.0	15.0	23.0	2.00	4.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.11	0.878	1.34	0.12	0.23	
	µmol/l	17.3	13.7	20.9	1.80	3.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.01	0.801	1.22	0.10	0.21	
	µmol/l	16.0	12.6	19.4	1.70	3.40	Modified Jendrassik
	mg/dl	0.936	0.737	1.14	0.10	0.20	
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.49	1.18	1.80	0.16	0.31	
	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	27.3	21.6	33.0	2.85	5.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Nitrobenzenediazonium salt
	mg/dl	1.50	1.18	1.82	0.16	0.32	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.26	1.92	0.17	0.33	
	µmol/l	30.7	24.3	37.1	3.20	6.40	Oxidation to Biliverdin/Vanadate
	mg/dl	1.80	1.42	2.18	0.19	0.38	



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Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	34.2	27.0	41.4	3.60	7.20	Modified Jendrassik
	mg/dl	2.00	1.58	2.42	0.21	0.42	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.12	1.91	2.33	0.11	0.21	Ion selective electrode
	mg/dl	8.50	7.66	9.34	0.42	0.84	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Methylthymol blue
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA	
mg/dl	8.62	7.78	9.46	0.42	0.84		
Chloride	mmol/l	97.7	89.9	106	3.90	7.80	Colorimetric
	mmol/l	96.0	88.3	104	3.85	7.70	Ortho Vitros Microslide Systems
	mmol/l	94.9	87.4	102	3.75	7.50	ISE indirect
	mmol/l	96.8	89.1	105	3.85	7.70	ISE direct
	mmol/l	107	98.2	116	4.40	8.80	Optical Fluorescence
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Ortho Vitros Microslide Systems
	mg/dl	157	137	177	10.00	20.00	
	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
	mmol/l	4.24	3.69	4.79	0.28	0.55	Cholesterol Dehydrogenase
	mg/dl	164	142	186	11.00	22.00	

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Cholinesterase	U/l	4686	3749	5623	468.50	937.00	Colorimetric Benzoylcholine 37°C
	U/l	4884	3907	5861	488.50	977.00	Colorimetric Butyrylthiocholine 37°C
	U/l	4864	3891	5837	486.50	973.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	193	158	228	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	200	164	236	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	196	161	231	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	83	68	98	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	209	171	247	19.00	38.00	Monothioglycerol 37°C
	U/l	131	107	155	12.00	24.00	Monothioglycerol 30°C
	U/l	89	73	105	8.00	16.00	Monothioglycerol 25°C
	U/l	195	160	230	17.50	35.00	Creatinine phosphate substrate Start 37°C
U/l	122	100	144	11.00	22.00	Creatinine phosphate substrate Start 30°C	
U/l	83	68	98	7.50	15.00	Creatinine phosphate substrate Start 25°C	
Copper	µmol/l	15.9	12.7	19.1	1.60	3.20	Atomic absorption
	µg/dl	101	80.8	121	10.10	20.20	
	µmol/l	15.3	12.2	18.4	1.55	3.10	Colorimetric
	µg/dl	97.3	77.6	117	9.85	19.70	
Cortisol	nmol/l	474	356	592	59.00	118.00	Roche Cobas E411
	µg/dl	17.1	12.8	21.4	2.15	4.30	

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Creatinine	μmol/l	124	99.6	148	12.20	24.40	Alkaline picrate with deproteinization
	mg/dl	1.40	1.13	1.67	0.14	0.27	
	μmol/l	127	101	153	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	μmol/l	125	99.8	150	12.60	25.20	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	124	99.0	149	12.50	25.00	Creatinine PAP method
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	μmol/l	128	102	154	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	μmol/l	125	99.9	150	12.55	25.10	Jaffe rate blanked
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	μmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 μmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
μmol/l	121	96.5	146	12.25	24.50	Jaffe rate blanked compensated (-18 μmol/l)	
mg/dl	1.37	1.09	1.65	0.14	0.28		
μmol/l	118	94.5	142	11.75	23.50	Vitros IDMS Traceable	
mg/dl	1.33	1.07	1.59	0.13	0.26		
μmol/l	124	99.2	149	12.40	24.80	IDMS traceable	
mg/dl	1.40	1.12	1.68	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.30	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.24	1.79	2.69	0.23	0.45	Immunoturbidimetric
	ng/ml	1.75	1.40	2.10	0.18	0.35	
Folate	nmol/l	42.9	32.6	53.2	5.15	10.30	Roche Cobas 6000/8000
	ng/ml	18.9	14.4	23.4	2.25	4.50	

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Free T4	pmol/l	17.2	12.9	21.5	2.15	4.30	Abbott Architect
	ng/dl	1.34	1.01	1.67	0.17	0.33	
	pg/ml	13.4	10.1	16.7	1.65	3.30	Abbott Architect
	pmol/l	19.8	14.9	24.7	2.45	4.90	Siemens Centaur XP/XPT/Classic
	ng/dl	1.54	1.16	1.92	0.19	0.38	
	pg/ml	15.4	11.6	19.2	1.90	3.80	Siemens Centaur XP/XPT/Classic
	pmol/l	21.0	15.8	26.2	2.60	5.20	Siemens Immulite 2000/2500
	ng/dl	1.64	1.23	2.05	0.21	0.41	
	pg/ml	16.4	12.3	20.5	2.05	4.10	Siemens Immulite 2000/2500
	pmol/l	22.0	16.5	27.5	2.75	5.50	Siemens Immulite 1000
	ng/dl	1.72	1.29	2.15	0.22	0.43	
	pg/ml	17.2	12.9	21.5	2.15	4.30	Siemens Immulite 1000
	pmol/l	18.5	13.9	23.1	2.30	4.60	Beckman Dxl800
	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 Dxl800
	pmol/l	22.5	16.8	28.2	2.85	5.70	Roche Elecsys
	ng/dl	1.76	1.31	2.21	0.23	0.45	
	pg/ml	17.6	13.1	22.1	2.25	4.50	Roche Elecsys
	pmol/l	19.2	14.4	24.0	2.40	4.80	Beckman Access
	ng/dl	1.50	1.12	1.88	0.19	0.38	
	pg/ml	15.0	11.2	18.8	1.90	3.80	Beckman Access
	pmol/l	37.4	28.0	46.8	4.70	9.40	Vitros ECi
	ng/dl	2.92	2.18	3.66	0.37	0.74	
	pg/ml	29.2	21.8	36.6	3.70	7.40	Vitros ECi
pmol/l	22.8	17.1	28.5	2.85	5.70	Roche Cobas E411	
ng/dl	1.78	1.33	2.23	0.23	0.45		
pg/ml	17.8	13.3	22.3	2.25	4.50	Roche Cobas E411	

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### Range

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Free T4	pmol/l	22.2	16.7	27.7	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.73	1.30	2.16	0.22	0.43	
	pg/ml	17.3	13.0	21.6	2.15	4.30	Roche Cobas 6000/8000
	pmol/l	21.9	16.4	27.4	2.75	5.50	Biomerieux Vidas FT4N Kit
	ng/dl	1.71	1.28	2.14	0.22	0.43	
	pg/ml	17.1	12.8	21.4	2.15	4.30	Biomerieux Vidas FT4N Kit
	pmol/l	21.4	16.1	26.7	2.65	5.30	Siemens Centaur CP
	ng/dl	1.67	1.26	2.08	0.21	0.41	
Gentamicin	µmol/l	6.97	5.58	8.36	0.70	1.39	Immunoturbidimetric
	µg/ml	3.33	2.67	3.99	0.33	0.66	
gamma-GT	U/l	54	46	62	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	74	63	85	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	49	42	56	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	57	49	65	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	45	39	51	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	60	51	69	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	37	31	43	3.00	6.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
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
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Ortho Vitros Microslide Systems
	mg/dl	113	95.7	130	8.65	17.30	
	mmol/l	6.55	5.57	7.53	0.49	0.98	Glucose dehydrogenase
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	6.41	5.44	7.38	0.49	0.97	Hexokinase
	mg/dl	116	98.0	134	9.00	18.00	
	mmol/l	6.30	5.35	7.25	0.48	0.95	Oxygen electrode
	mg/dl	114	96.4	132	8.80	17.60	
HDL - Cholesterol	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL PPD
	mg/dl	55.2	46.7	63.7	4.25	8.50	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Vitros Magnetic HDL
	mg/dl	58.7	49.8	67.6	4.45	8.90	
	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL PEGME
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct Clearance Method
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.52	1.30	1.74	0.11	0.22	Vitros 5.1 FS microtip assay
	mg/dl	58.7	50.2	67.2	4.25	8.50	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
HDL - Cholesterol	mmol/l	1.50	1.28	1.72	0.11	0.22	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	57.9	49.4	66.4	4.25	8.50	
	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct HDL Roche 3rd generation
	mg/dl	58.3	49.4	67.2	4.45	8.90	
HDL - Ultra	mmol/l	1.40	1.19	1.61	0.11	0.21	HDL - Ultra
	mg/dl	54.0	45.9	62.1	4.05	8.10	
Immunoglobulin A	g/l	1.50	1.12	1.88	0.19	0.38	Immunoturbidimetric
	mg/dl	150	112	188	19.00	38.00	
Immunoglobulin G	g/l	5.88	4.82	6.94	0.53	1.06	Immunoturbidimetric
	mg/dl	588	482	694	53.00	106.00	
Immunoglobulin M	g/l	0.76	0.61	0.91	0.08	0.15	Immunoturbidimetric
	mg/dl	75.8	60.6	91.0	7.60	15.20	
Iron	µmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric with ppt.
	µg/dl	101	82.2	120	9.40	18.80	
	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	83.3	119	8.85	17.70	
Ortho Vitros Microslide Systems	µmol/l	18.5	15.2	21.8	1.65	3.30	Ortho Vitros Microslide Systems
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
	mmol/l	1.48	1.21	1.75	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.3	10.9	15.7	1.20	2.40	
UV LDH	mmol/l	1.56	1.28	1.84	0.14	0.28	UV LDH
	mg/dl	14.1	11.5	16.7	1.30	2.60	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
LAP	U/l	15	13	17	1.00	2.00	NAGEL 37°C
LD (LDH)	U/l	598	508	688	45.00	90.00	Ortho Vitros Microslide Systems 37°C
	U/l	191	163	219	14.00	28.00	L->P 37°C
	U/l	138	118	158	10.00	20.00	L->P 30°C
	U/l	97	83	111	7.00	14.00	L->P 25°C
	U/l	413	351	475	31.00	62.00	P->L Scandinavian & Dutch 37°C
	U/l	298	253	343	22.50	45.00	P->L Scandinavian & Dutch 30°C
	U/l	209	178	240	15.50	31.00	P->L Scandinavian & Dutch 25°C
	U/l	402	341	463	30.50	61.00	P->L German methods 37°C
	U/l	290	246	334	22.00	44.00	P->L German methods 30°C
	U/l	204	173	235	15.50	31.00	P->L German methods 25°C
	U/l	399	340	458	29.50	59.00	P->L SFBC 37°C
	U/l	288	245	331	21.50	43.00	P->L SFBC 30°C
	U/l	202	172	232	15.00	30.00	P->L SFBC 25°C
	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
	U/l	149	126	172	11.50	23.00	L->P IFCC 30°C
U/l	104	89	119	7.50	15.00	L->P IFCC 25°C	
Lipase	U/l	34	27	41	3.50	7.00	Other Colorimetric 37°C
	U/l	218	175	261	21.50	43.00	Ortho Vitros Microslide Systems 37°C
	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	30	24	36	3.00	6.00	Roche Turbidimetric with colipase 37°C
	U/l	135	108	162	13.50	27.00	Randox Turbidimetric with colipase 37°C
	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.13	1.00	1.26	0.07	0.13	Ortho Vitros Microslide Systems
	mg/dl	0.785	0.692	0.878	0.05	0.09	



## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Lithium	mmol/l	0.99	0.87	1.11	0.06	0.12	Flame photometry	
	mg/dl	0.688	0.606	0.770	0.04	0.08		
	mmol/l	0.99	0.87	1.11	0.06	0.12	Ion selective electrode	
	mg/dl	0.688	0.606	0.770	0.04	0.08		
	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		
	mmol/l	1.03	0.91	1.15	0.06	0.12	Randox Colorimetric	
	mg/dl	0.715	0.629	0.801	0.04	0.09		
	Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III
		mg/dl	2.15	1.90	2.40	0.13	0.25	
mmol/l		0.90	0.79	1.00	0.05	0.11	Ortho Vitros Microslide Systems	
mg/dl		2.18	1.91	2.45	0.14	0.27		
mmol/l		0.89	0.78	0.99	0.05	0.11	Atomic absorption	
mg/dl		2.16	1.90	2.42	0.13	0.26		
mmol/l		0.88	0.77	0.98	0.05	0.11	Calmagite	
mg/dl		2.13	1.87	2.39	0.13	0.26		
mmol/l		0.91	0.80	1.02	0.06	0.11	Xylidyl Blue	
mg/dl		2.22	1.95	2.49	0.14	0.27		
mmol/l		0.88	0.78	0.99	0.05	0.11	Methylthymol blue	
mg/dl		2.14	1.88	2.40	0.13	0.26		
mmol/l		0.91	0.80	1.02	0.05	0.11	Chlorphosponazo III	
mg/dl		2.21	1.94	2.48	0.14	0.27		
mmol/l		0.86	0.76	0.97	0.05	0.10	Enzymatic	
mg/dl		2.09	1.84	2.34	0.13	0.25		
NEFA	mmol/l	1.68	1.43	1.93	0.13	0.25	Colorimetric	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Osmolality	mOsm/kg	296	237	355	29.50	59.00	Calculated	
	mOsm/kg	310	248	372	31.00	62.00	Freezing point depression	
Paracetamol	mmol/l	0.13	0.10	0.15	0.01	0.03	Colorimetric	
	mg/l	19.1	15.3	22.9	1.90	3.80		
Phosphate Inorganic	mmol/l	1.51	1.29	1.73	0.11	0.22	Ortho Vitros Microslide Systems	
	mg/dl	4.68	4.00	5.36	0.34	0.68		
	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		
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	4.03	3.70	4.36	0.17	0.33	Ortho Vitros Microslide Systems
		mmol/l	3.95	3.63	4.27	0.16	0.32	Enzymatic
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	Flame photometry	
	mmol/l	3.93	3.61	4.25	0.16	0.32	ISE method - direct	
	mmol/l	3.97	3.65	4.29	0.16	0.32	ISE method - indirect	
	mmol/l	3.88	3.57	4.19	0.16	0.31	Optical Fluorescence	
	mmol/l	3.81	3.50	4.12	0.16	0.31	Colorimetric	
	Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Ortho Vitros Microslide Systems
g/dl		5.82	4.66	6.98	0.58	1.16		
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		
g/l		57.7	46.1	69.3	5.80	11.60	Biuret reaction kinetic	
g/dl		5.77	4.61	6.93	0.58	1.16		
PSA Total	ng/ml =	8.33	6.25	10.4	1.04	2.08	Tosoh Series	
	ng/ml =	11.1	8.33	13.9	1.39	2.77	Siemens Immulite 1000	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
PSA Total	ng/ml =	12.0	8.98	15.0	1.51	3.02	Roche Elecsys Modular E170
	ng/ml =	11.7	8.81	14.6	1.45	2.89	Beckman Access standardised to Hybritech
	ng/ml =	11.4	8.54	14.3	1.43	2.86	bioMerieux VIDAS TPSA
	ng/ml =	9.58	7.18	12.0	1.20	2.40	Siemens Centaur XP/XPT/Classic
	ng/ml =	12.2	9.17	15.2	1.52	3.03	Siemens Immulite 2000 1st Generation
	ng/ml =	10.1	7.57	12.6	1.27	2.53	Abbott Architect
	ng/ml =	11.2	8.40	14.0	1.40	2.80	Ortho Vitros ECi
	ng/ml =	12.2	9.17	15.2	1.52	3.03	Cobas E411
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.80	7.18	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	143	136	150	3.50	7.00	Flame photometry
	mmol/l	142	135	149	3.50	7.00	ISE method - direct
	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
	mmol/l	138	131	145	3.50	7.00	Optical Fluorescence
	mmol/l	140	133	147	3.50	7.00	Colorimetric
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.01	0.81	1.21	0.10	0.20	Abbott Architect
	µU/ml =	1.31	1.04	1.58	0.14	0.27	bioMerieux VIDAS TSH
	µU/ml =	1.35	1.08	1.62	0.14	0.27	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Siemens Immulite 2000/2500
	µU/ml =	1.24	1.00	1.48	0.12	0.24	Siemens Immulite 1000

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Thyroid Stimulating Hormone	µU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Elecsys
	µU/ml =	1.12	0.89	1.35	0.11	0.23	Beckman Access Fast TSH
	µU/ml =	1.11	0.89	1.33	0.11	0.22	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.16	0.93	1.39	0.12	0.23	Tosoh Series
	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 =	1.35	1.08	1.62	0.14	0.27	Roche Cobas 6000/8000
	µU/ml =	1.09	0.88	1.31	0.11	0.22	Beckman Dxl800 Hyper TSH
	µU/ml =	1.09	0.87	1.31	0.11	0.22	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.03	0.82	1.24	0.10	0.21	Siemens Centaur CP TSH3-Ultra
µU/ml =	1.08	0.87	1.30	0.11	0.22	Beckman Dxl 600/800 Access (3rd IS)	
TIBC	µmol/l	40.8	32.2	49.4	4.30	8.60	Ortho Vitros Microslide Systems
	µg/dl	228	180	276	24.00	48.00	
	µmol/l	34.0	26.9	41.1	3.55	7.10	Removal of excess free iron
	µg/dl	190	150	230	20.00	40.00	
	µmol/l	36.5	28.8	44.2	3.85	7.70	FE+UIBC(saturation with iron)
	µg/dl	204	161	247	21.50	43.00	
	µmol/l	34.1	26.9	41.3	3.60	7.20	Direct Colorimetric
	µg/dl	191	150	232	20.50	41.00	
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. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.45	1.84	3.06	0.31	0.61	Abbott Architect
	ng/ml	1.59	1.20	1.98	0.20	0.39	
	ng/dl	159	120	198	19.50	39.00	Abbott Architect
	nmol/l	2.80	2.10	3.50	0.35	0.70	BioMerieux Vidas
	ng/ml	1.82	1.37	2.27	0.23	0.45	
	ng/dl	182	137	227	22.50	45.00	BioMerieux Vidas
	nmol/l	2.83	2.12	3.54	0.36	0.71	Siemens Centaur XP/XPT/Classic
	ng/ml	1.84	1.38	2.30	0.23	0.46	
	ng/dl	184	138	230	23.00	46.00	Siemens Centaur XP/XPT/Classic
	nmol/l	2.38	1.79	2.97	0.30	0.59	Siemens Immulite 1000
	ng/ml	1.55	1.17	1.93	0.19	0.38	
	ng/dl	155	117	193	19.00	38.00	Siemens Immulite 1000
	nmol/l	2.73	2.04	3.42	0.35	0.69	Beckman Dxl800
	ng/ml	1.78	1.33	2.23	0.23	0.45	
	ng/dl	178	133	223	22.50	45.00	Beckman Dxl800
	nmol/l	2.75	2.06	3.44	0.35	0.69	Roche Elecsys
	ng/ml	1.79	1.34	2.24	0.23	0.45	
	ng/dl	179	134	224	22.50	45.00	Roche Elecsys
	nmol/l	2.80	2.10	3.50	0.35	0.70	Beckman Access
	ng/ml	1.82	1.37	2.27	0.23	0.45	
	ng/dl	182	137	227	22.50	45.00	Beckman Access
	nmol/l	2.42	1.82	3.02	0.30	0.60	Tosoh Series
	ng/ml	1.58	1.18	1.98	0.20	0.40	
	ng/dl	158	118	198	20.00	40.00	Tosoh Series
nmol/l	3.25	2.44	4.06	0.41	0.81	Vitros ECi	
ng/ml	2.12	1.59	2.65	0.27	0.53		
ng/dl	212	159	265	26.50	53.00	Vitros ECi	

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T3	nmol/l	2.84	2.13	3.55	0.36	0.71	Roche Cobas E411
	ng/ml	1.85	1.39	2.31	0.23	0.46	
	ng/dl	185	139	231	23.00	46.00	Roche Cobas E411
	nmol/l	2.81	2.11	3.51	0.35	0.70	Roche Cobas 6000/8000
	ng/ml	1.83	1.37	2.29	0.23	0.46	
	ng/dl	183	137	229	23.00	46.00	Roche Cobas 6000/8000
	nmol/l	2.83	2.12	3.54	0.36	0.71	Siemens Centaur CP
	ng/ml	1.84	1.38	2.30	0.23	0.46	
	ng/dl	184	138	230	23.00	46.00	Siemens Centaur CP
Total T4	nmol/l	85.4	64.0	107	10.70	21.40	Abbott Architect
	µg/dl	6.66	4.99	8.33	0.84	1.67	
	ng/ml	66.6	49.9	83.3	8.35	16.70	Abbott Architect
	nmol/l	80.4	60.3	101	10.05	20.10	BioMerieux Vidas
	µg/dl	6.27	4.70	7.84	0.79	1.57	
	ng/ml	62.7	47.0	78.4	7.85	15.70	BioMerieux Vidas
	nmol/l	79.8	59.9	99.7	9.95	19.90	Siemens Centaur XP/XPT/Classic
	µg/dl	6.22	4.67	7.77	0.78	1.55	
	ng/ml	62.2	46.7	77.7	7.75	15.50	Siemens Centaur XP/XPT/Classic
	nmol/l	78.9	59.2	98.6	9.85	19.70	Siemens Immulite 2000/2500
	µg/dl	6.15	4.62	7.68	0.77	1.53	
	ng/ml	61.5	46.2	76.8	7.65	15.30	Siemens Immulite 2000/2500
	nmol/l	84.6	63.4	106	10.60	21.20	Roche Elecsys
	µg/dl	6.60	4.95	8.25	0.83	1.65	
	ng/ml	66.0	49.5	82.5	8.25	16.50	Roche Elecsys

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Total T4	nmol/l	82.9	62.2	104	10.35	20.70	Beckman Access
	µg/dl	6.47	4.85	8.09	0.81	1.62	
	ng/ml	64.7	48.5	80.9	8.10	16.20	Beckman Access
	nmol/l	78.0	58.5	97.5	9.75	19.50	Tosoh Series
	µg/dl	6.08	4.56	7.60	0.76	1.52	
	ng/ml	60.8	45.6	76.0	7.60	15.20	Tosoh Series
	nmol/l	74.1	55.6	92.6	9.25	18.50	Vitros ECi
	µg/dl	5.78	4.34	7.22	0.72	1.44	
	ng/ml	57.8	43.4	72.2	7.20	14.40	Vitros ECi
	nmol/l	84.4	63.3	106	10.55	21.10	Roche Cobas E411
	µg/dl	6.58	4.94	8.22	0.82	1.64	
	ng/ml	65.8	49.4	82.2	8.20	16.40	Roche Cobas E411
	nmol/l	82.9	62.2	104	10.35	20.70	Roche Cobas 6000/8000
	µg/dl	6.47	4.85	8.09	0.81	1.62	
	ng/ml	64.7	48.5	80.9	8.10	16.20	Roche Cobas 6000/8000
	nmol/l	83.4	62.5	104	10.45	20.90	Monobind Inc. ELISA / CLIA
	µg/dl	6.51	4.88	8.14	0.82	1.63	
	ng/ml	65.1	48.8	81.4	8.15	16.30	Monobind Inc. ELISA / CLIA
nmol/l	89.0	66.7	111	11.15	22.30	Siemens Centaur CP	
µg/dl	6.94	5.20	8.68	0.87	1.74		
ng/ml	69.4	52.0	86.8	8.70	17.40	Siemens Centaur CP	
Transferrin	g/l	1.53	1.23	1.83	0.15	0.30	Immunoturbidimetric
	mg/dl	153	123	183	15.00	30.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.1	115	8.00	16.00	

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction	
	mg/dl	99.1	83.5	115	7.80	15.60		
	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G Kinase EP. no correction	
	mg/dl	98.2	82.7	114	7.75	15.50		
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	99.1	83.0	115	8.05	16.10		
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	98.2	82.6	114	7.80	15.60		
	mmol/l	1.26	1.06	1.46	0.10	0.20	Ortho Vitros Microslide Systems	
	mg/dl	112	93.8	130	9.10	18.20		
	UIBC	µmol/l	18.1	14.9	21.3	1.60	3.20	Direct Colorimetric
		µg/dl	101	83.3	119	8.85	17.70	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Ortho Vitros Microslide Systems	
	mg/dl	43.6	37.1	50.1	3.25	6.50		
	mmol/l	7.59	6.46	8.72	0.57	1.13	Urease end point	
	mg/dl	45.6	38.8	52.4	3.40	6.80		
	mmol/l	7.63	6.48	8.78	0.58	1.15	Urease kinetic	
	mg/dl	45.9	38.9	52.9	3.50	7.00		
	mmol/l	7.62	6.48	8.76	0.57	1.14	Urease hypochlorite	
	mg/dl	45.8	38.9	52.7	3.45	6.90		
	mmol/l	7.63	6.49	8.77	0.57	1.14	BUN	
	mg/dl	21.4	18.2	24.6	1.60	3.20		
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Ortho Vitros Microslide Systems	
	mg/dl	5.76	5.02	6.50	0.37	0.74		



## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase catalase 340nm
	mg/dl	6.01	5.24	6.78	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Reduction methods
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.06	5.28	6.84	0.39	0.78	
	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	0.36	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290	
mg/dl	5.98	5.21	6.75	0.39	0.77		
Vitamin B12	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Zinc	pmol/l	506	405	607	50.50	101.00	Roche Cobas E411
	pg/ml	686	549	823	68.50	137.00	
Zinc	µmol/l	23.2	18.6	27.8	2.30	4.60	Colorimetric with deproteinisation
	µg/dl	151	121	181	15.00	30.00	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin (electrophoresis)		69.5	62.6	76.4	3.45	6.90	% of total Protein (Beckman Capillary)
alpha-1-globulin		5.0	3.8	6.2	0.60	1.20	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.0	5.3	8.7	0.84	1.68	% of total Protein (Beckman Capillary)
beta-globulin		8.9	6.8	11.0	1.07	2.14	% 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. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.8	36.4	49.2	3.20	6.40	Bromocresol Green
	g/dl	4.28	3.64	4.92	0.32	0.64	
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	194	165	223	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	151	129	173	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	124	105	143	9.50	19.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	15.5	12.3	18.7	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	19.4	15.4	23.4	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.13	0.901	1.36	0.11	0.23	
Bilirubin Total	µmol/l	29.7	23.4	36.0	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.74	1.37	2.11	0.19	0.37	
	µmol/l	27.9	22.0	33.8	2.95	5.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.63	1.29	1.97	0.17	0.34	

## MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Oxidation to Biliverdin/Vanadate
	mg/dl	1.73	1.36	2.10	0.19	0.37	
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	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.17	3.63	4.71	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
CK Total	U/l	204	168	240	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	123	98.2	148	12.40	24.80	Alkaline picrate no deproteinization
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	122	97.7	146	12.15	24.30	Enzymatic UV method
	mg/dl	1.38	1.10	1.66	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Creatinine PAP method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
gamma-GT	U/l	56	48	64	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	44	38	50	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C

## MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

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	45	39	51	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	35	30	40	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.37	5.42	7.32	0.48	0.95	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.51	5.54	7.48	0.49	0.97	Glucose oxidase
	mg/dl	117	99.8	134	8.60	17.20	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PPD
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct Clearance Method
	mg/dl	55.2	47.1	63.3	4.05	8.10	
Iron	µmol/l	18.0	14.7	21.3	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.2	120	9.40	18.80	
Lactate	mmol/l	1.60	1.31	1.89	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.4	11.8	17.0	1.30	2.60	
LD (LDH)	U/l	404	343	465	30.50	61.00	P->L German methods 37°C
	U/l	292	248	336	22.00	44.00	P->L German methods 30°C
	U/l	205	174	236	15.50	31.00	P->L German methods 25°C
	U/l	418	356	480	31.00	62.00	P->L SFBC 37°C
	U/l	302	257	347	22.50	45.00	P->L SFBC 30°C
	U/l	212	180	244	16.00	32.00	P->L SFBC 25°C
	U/l	208	177	239	15.50	31.00	L->P IFCC 37°C
	U/l	150	128	172	11.00	22.00	L->P IFCC 30°C
	U/l	105	90	120	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. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
Phosphate Inorganic	mmol/l	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.81	4.09	5.53	0.36	0.72	
	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	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
TIBC	µmol/l	37.7	29.8	45.6	3.95	7.90	FE+UIBC(saturation with iron)
	µg/dl	211	167	255	22.00	44.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	82.9	115	8.10	16.20	
	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	101	85.0	117	8.00	16.00	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	100	83.7	116	8.15	16.30	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.2	114	8.00	16.00	
Urea	mmol/l	7.81	6.64	8.98	0.59	1.17	Urease end point
	mg/dl	46.9	39.9	53.9	3.50	7.00	
	mmol/l	7.67	6.52	8.82	0.58	1.15	Urease kinetic
	mg/dl	46.1	39.2	53.0	3.45	6.90	
	mmol/l	7.56	6.42	8.70	0.57	1.14	Urease hypochlorite
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.67	6.52	8.82	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	

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

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.13	5.34	6.92	0.40	0.79	
	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	5.88	5.12	6.64	0.38	0.76	


**Ortho VITROS®**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Ortho Vitros Microslide Systems
	g/dl	4.13	3.51	4.75	0.31	0.62	
Alkaline Phosphatase	U/l	163	139	187	12.00	24.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	56	45	67	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Amylase Total	U/l	67	57	77	5.00	10.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	16.3	12.9	19.7	1.70	3.40	Ortho Vitros Microslide Systems
Bilirubin Conjugated Vitros BC	µmol/l	12.0	9.48	14.5	1.26	2.52	BuBc Vitros Slide
	mg/dl	0.702	0.555	0.849	0.07	0.15	
Bilirubin Total	µmol/l	26.3	20.8	31.8	2.75	5.50	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	25.4	20.1	30.7	2.65	5.30	Vitros 250/500/700/950 Total BUBC
	mg/dl	1.49	1.18	1.80	0.16	0.31	
Bilirubin, Unconjugated Vitros BU	µmol/l	13.0	10.3	15.7	1.35	2.70	BuBc Vitros Slide
	mg/dl	0.761	0.603	0.919	0.08	0.16	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Chloride	mmol/l	96.0	88.3	104	3.85	7.70	Ortho Vitros Microslide Systems
Cholesterol	mmol/l	4.07	3.54	4.60	0.27	0.53	Ortho Vitros Microslide Systems
	mg/dl	157	137	177	10.00	20.00	
Cholinesterase	U/l	4864	3891	5837	486.50	973.00	Ortho Vitros Microslide Systems 37°C



## Ortho VITROS®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
CK Total	U/l	193	158	228	17.50	35.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	118	94.5	142	11.75	23.50	Vitros IDMS Traceable
	mg/dl	1.33	1.07	1.59	0.13	0.26	
Free T4	pmol/l	37.4	28.0	46.8	4.70	9.40	Vitros ECi
	ng/dl	2.92	2.18	3.66	0.37	0.74	
	pg/ml	29.2	21.8	36.6	3.70	7.40	Vitros ECi
gamma-GT	U/l	74	63	85	5.50	11.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.25	5.31	7.19	0.47	0.94	Ortho Vitros Microslide Systems
	mg/dl	113	95.7	130	8.65	17.30	
HDL - Cholesterol	mmol/l	1.52	1.29	1.75	0.12	0.23	Vitros Magnetic HDL
	mg/dl	58.7	49.8	67.6	4.45	8.90	
	mmol/l	1.52	1.30	1.74	0.11	0.22	Vitros 5.1 FS microtip assay
	mg/dl	58.7	50.2	67.2	4.25	8.50	
	mmol/l	1.50	1.28	1.72	0.11	0.22	Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation
	mg/dl	57.9	49.4	66.4	4.25	8.50	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Ortho Vitros Microslide Systems
	µg/dl	103	85.0	121	9.00	18.00	
Lactate	mmol/l	1.48	1.21	1.75	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	598	508	688	45.00	90.00	Ortho Vitros Microslide Systems 37°C
Lipase	U/l	218	175	261	21.50	43.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.13	1.00	1.26	0.07	0.13	Ortho Vitros Microslide Systems
	mg/dl	0.785	0.692	0.878	0.05	0.09	

## Ortho VITROS®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.18	1.91	2.45	0.14	0.27	
Phosphate Inorganic	mmol/l	1.51	1.29	1.73	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	4.68	4.00	5.36	0.34	0.68	
Potassium	mmol/l	4.03	3.70	4.36	0.17	0.33	Ortho Vitros Microslide Systems
Protein Total	g/l	58.2	46.6	69.8	5.80	11.60	Ortho Vitros Microslide Systems
	g/dl	5.82	4.66	6.98	0.58	1.16	
Sodium	mmol/l	144	137	151	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.13	0.90	1.36	0.11	0.23	Vitros ECi
TIBC	µmol/l	40.8	32.2	49.4	4.30	8.60	Ortho Vitros Microslide Systems
	µg/dl	228	180	276	24.00	48.00	
Total T3	nmol/l	3.25	2.44	4.06	0.41	0.81	Vitros ECi
	ng/ml	2.12	1.59	2.65	0.27	0.53	
	ng/dl	212	159	265	26.50	53.00	Vitros ECi
Total T4	nmol/l	74.1	55.6	92.6	9.25	18.50	Vitros ECi
	µg/dl	5.78	4.34	7.22	0.72	1.44	
	ng/ml	57.8	43.4	72.2	7.20	14.40	Vitros ECi
Triglycerides	mmol/l	1.26	1.06	1.46	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	112	93.8	130	9.10	18.20	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Ortho Vitros Microslide Systems
	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	0.34	0.30	0.39	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.76	5.02	6.50	0.37	0.74	

## PRESTIGE 24i

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Green
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	252	214	290	19.00	38.00	Diethanolamine buffer DEA 37°C
	U/l	196	167	225	14.50	29.00	Diethanolamine buffer DEA 30°C
	U/l	161	137	185	12.00	24.00	Diethanolamine buffer DEA 25°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	119	101	137	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
Amylase Total	U/l	102	87	117	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	19.3	15.2	23.4	2.05	4.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.13	0.889	1.37	0.12	0.24	
	µmol/l	17.7	14.0	21.4	1.85	3.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.04	0.819	1.26	0.11	0.22	
Bilirubin Total	µmol/l	31.5	24.9	38.1	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.84	1.46	2.22	0.19	0.38	

## PRESTIGE 24i

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Calcium	mmol/l	1.97	1.77	2.17	0.10	0.20	Cresolphthalein complexone
	mg/dl	7.90	7.09	8.71	0.41	0.81	
	mmol/l	2.09	1.88	2.30	0.11	0.21	Arsenazo III
	mg/dl	8.38	7.54	9.22	0.42	0.84	
Cholesterol	mmol/l	4.28	3.72	4.84	0.28	0.56	Cholesterol Oxidase
	mg/dl	165	144	186	10.50	21.00	
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	128	103	153	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	121	96.5	146	12.25	24.50	Jaffe rate blanked
	mg/dl	1.37	1.09	1.65	0.14	0.28	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	37	31	43	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.57	5.59	7.55	0.49	0.98	Glucose oxidase
	mg/dl	118	101	135	8.50	17.00	
HDL - Cholesterol	mmol/l	1.32	1.12	1.52	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	51.0	43.2	58.8	3.90	7.80	
	mmol/l	1.19	1.01	1.37	0.09	0.18	Direct Clearance Method
mg/dl	45.9	39.0	52.8	3.45	6.90		

## PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
LD (LDH)	U/l	406	345	467	30.50	61.00	P->L German methods 37°C
	U/l	293	249	337	22.00	44.00	P->L German methods 30°C
	U/l	206	175	237	15.50	31.00	P->L German methods 25°C
Magnesium	mmol/l	0.96	0.84	1.07	0.06	0.12	Xylidyl Blue
	mg/dl	2.33	2.05	2.61	0.14	0.28	
Phosphate Inorganic	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	
Protein Total	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction end point
	g/dl	5.75	4.60	6.90	0.58	1.15	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
Urea	mmol/l	7.70	6.55	8.85	0.58	1.15	Urease kinetic
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	7.70	6.55	8.85	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.22	6.78	0.39	0.78	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Albumin	g/l	45.0	38.3	51.7	3.35	6.70	Bromocresol Green
	g/dl	4.50	3.83	5.17	0.34	0.67	
	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	
	g/l	44.5	37.8	51.2	3.35	6.70	Turbidimetric Assays
	g/dl	4.45	3.78	5.12	0.34	0.67	
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
	U/l	164	139	189	12.50	25.00	AMP optimised to IFCC 37°C
	U/l	128	108	148	10.00	20.00	AMP optimised to IFCC 30°C
	U/l	105	89	121	8.00	16.00	AMP optimised to IFCC 25°C
	U/l	161	137	185	12.00	24.00	Colorimetric 37°C
	U/l	125	107	143	9.00	18.00	Colorimetric 30°C
	U/l	103	88	118	7.50	15.00	Colorimetric 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
Amylase Pancreatic	U/l	72	61	83	5.50	11.00	Immunoinhibition EPS substrate 37°C
	U/l	68	58	78	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	87	74	100	6.50	13.00	Randox Liquid Ethylidene pNPG7 37°C

## Roche Cobas 6000 c501 e601

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Amylase Total	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	87	74	100	6.50	13.00	BM/Roche Colorimetric 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	14.3	11.3	17.3	1.50	3.00	Colorimetric
	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bile Acids	µmol/l	23.4	18.7	28.1	2.35	4.70	Enzymatic Colorimetric
Bilirubin Direct	µmol/l	18.2	14.4	22.0	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.06	0.842	1.28	0.11	0.22	
	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.848	1.31	0.12	0.23	
	µmol/l	18.1	14.3	21.9	1.90	3.80	Roche JG factored
	mg/dl	1.06	0.837	1.28	0.11	0.22	
	µmol/l	18.2	14.4	22.0	1.90	3.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.06	0.842	1.28	0.11	0.22	
Bilirubin Total	µmol/l	27.5	21.7	33.3	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.27	1.95	0.17	0.34	
	µmol/l	27.0	21.4	32.6	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.25	1.93	0.17	0.34	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA
	mg/dl	8.62	7.78	9.46	0.42	0.84	
Chloride	mmol/l	91.5	84.1	98.9	3.70	7.40	ISE indirect
Cholesterol	mmol/l	4.10	3.56	4.64	0.27	0.54	Cholesterol Oxidase
	mg/dl	158	137	179	10.50	21.00	
Cholinesterase	U/l	4631	3705	5557	463.00	926.00	Colorimetric Benzoylcholine 37°C
	U/l	4696	3757	5635	469.50	939.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	197	161	233	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	123	101	145	11.00	22.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	68	100	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	191	156	226	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	81	66	96	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Copper	µmol/l	15.5	12.4	18.6	1.55	3.10	Colorimetric
	µg/dl	98.6	78.9	118	9.85	19.70	
Creatinine	µmol/l	121	96.9	145	12.05	24.10	Alkaline picrate with deproteinization
	mg/dl	1.37	1.09	1.65	0.14	0.28	



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	131	104	158	13.50	27.00	Jaffe rate blanked
	mg/dl	1.48	1.18	1.78	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
µmol/l	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	129	104	154	12.50	25.00	IDMS traceable
	mg/dl	1.46	1.18	1.74	0.14	0.28	
Free T4	pmol/l	22.2	16.7	27.7	2.75	5.50	Roche Cobas 6000/8000
	ng/dl	1.73	1.30	2.16	0.22	0.43	
	pg/ml	17.3	13.0	21.6	2.15	4.30	Roche Cobas 6000/8000
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.39	5.43	7.35	0.48	0.96	Glucose dehydrogenase
	mg/dl	115	97.8	132	8.60	17.20	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase	
	mg/dl	115	97.7	132	8.65	17.30		
	mmol/l	6.35	5.40	7.30	0.48	0.95	Glucose oxidase	
	mg/dl	114	97.3	131	8.35	16.70		
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation	
	mg/dl	52.5	44.8	60.2	3.85	7.70		
	mmol/l	1.52	1.29	1.75	0.12	0.23	Direct HDL PEGME	
	mg/dl	58.7	49.8	67.6	4.45	8.90		
Iron	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL Roche 3rd generation	
	mg/dl	59.1	50.2	68.0	4.45	8.90		
	Iron	μmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric with ppt.
		μg/dl	102	83.3	121	9.35	18.70	
μmol/l		18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.	
μg/dl		102	83.3	121	9.35	18.70		
Lactate	mmol/l	1.53	1.26	1.80	0.14	0.27	Colorimetric Lactate Oxidase	
	mg/dl	13.8	11.4	16.2	1.20	2.40		
LD (LDH)	U/l	207	176	238	15.50	31.00	L->P 37°C	
	U/l	149	127	171	11.00	22.00	L->P 30°C	
	U/l	105	89	121	8.00	16.00	L->P 25°C	
	U/l	399	340	458	29.50	59.00	P->L Scandinavian & Dutch 37°C	
	U/l	288	245	331	21.50	43.00	P->L Scandinavian & Dutch 30°C	
	U/l	202	172	232	15.00	30.00	P->L Scandinavian & Dutch 25°C	
	U/l	399	339	459	30.00	60.00	P->L German methods 37°C	
	U/l	288	245	331	21.50	43.00	P->L German methods 30°C	
	U/l	202	172	232	15.00	30.00	P->L German methods 25°C	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	208	176	240	16.00	32.00	L->P IFCC 37°C
	U/l	150	127	173	11.50	23.00	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	Other Colorimetric 37°C
	U/l	29	23	35	3.00	6.00	Roche Colorimetric 37°C
	U/l	29	23	35	3.00	6.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.01	0.89	1.13	0.06	0.12	Ion selective electrode
	mg/dl	0.701	0.619	0.783	0.04	0.08	
	mmol/l	1.02	0.90	1.14	0.06	0.12	Spectrophotometric
	mg/dl	0.708	0.623	0.793	0.04	0.09	
Magnesium	mmol/l	0.90	0.79	1.00	0.05	0.11	Arsenazo III
	mg/dl	2.18	1.91	2.45	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Atomic absorption
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.90	0.80	1.01	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	
	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	298	239	357	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	4.03	3.71	4.35	0.16	0.32	ISE method - indirect
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	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	59.1	47.3	70.9	5.90	11.80	Biuret reaction kinetic
	g/dl	5.91	4.73	7.09	0.59	1.18	
PSA Total	ng/ml =	12.1	9.05	15.2	1.53	3.05	Roche Cobas 6000/8000
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	μU/ml =	1.38	1.10	1.66	0.14	0.28	Roche Elecsys
	μU/ml =	1.35	1.08	1.62	0.14	0.27	Roche Cobas 6000/8000
TIBC	μmol/l	34.9	27.6	42.2	3.65	7.30	FE+UIBC(saturation with iron)
	μg/dl	195	154	236	20.50	41.00	
	μmol/l	35.1	27.7	42.5	3.70	7.40	Direct Colorimetric
	μg/dl	196	155	237	20.50	41.00	
	μmol/l	38.3	30.2	46.4	4.05	8.10	
μg/dl	214	169	259	22.50	45.00		
Total T3	nmol/l	2.81	2.11	3.51	0.35	0.70	Roche Cobas 6000/8000
	ng/ml	1.83	1.37	2.29	0.23	0.46	
	ng/dl	183	137	229	23.00	46.00	
Total T4	nmol/l	82.9	62.2	104	10.35	20.70	Roche Cobas 6000/8000
	μg/dl	6.47	4.85	8.09	0.81	1.62	
	ng/ml	64.7	48.5	80.9	8.10	16.20	
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	84.3	116	7.85	15.70	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	101	84.9	117	8.05	16.10	

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	L/G kinase EP. 0.11 mmol/l correction	
	mg/dl	103	86.1	120	8.45	16.90		
	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/Glycerol Dehydrogenase	
	mg/dl	102	85.5	119	8.25	16.50		
UIBC	µmol/l	17.1	14.0	20.2	1.55	3.10	Direct Colorimetric	
	µg/dl	95.6	78.3	113	8.65	17.30		
Urea	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease end point	
	mg/dl	45.3	38.5	52.1	3.40	6.80		
	mmol/l	7.53	6.40	8.66	0.57	1.13	Urease kinetic	
	mg/dl	45.3	38.5	52.1	3.40	6.80		
	mmol/l	7.53	6.40	8.66	0.57	1.13	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 catalase 340nm
		mg/dl	5.90	5.12	6.68	0.39	0.78	
mmol/l		0.35	0.30	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase	
mg/dl		5.88	5.11	6.65	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		0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm	
mg/dl		5.86	5.11	6.61	0.38	0.75		

## Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.7	38.0	51.4	3.35	6.70	Bromocresol Green
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	164	140	188	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	128	109	147	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	105	89	121	8.00	16.00	Roche Integra AMP buffer 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
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
Bilirubin Direct	µmol/l	17.7	14.0	21.4	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.04	0.819	1.26	0.11	0.22	
	µmol/l	17.6	13.9	21.3	1.85	3.70	Diazo with Sulphanilic Acid
	mg/dl	1.03	0.813	1.25	0.11	0.22	
	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	
Bilirubin Total	µmol/l	27.0	21.3	32.7	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.58	1.25	1.91	0.17	0.33	

## Roche Cobas C111®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.2	20.7	31.7	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	25.8	20.4	31.2	2.70	5.40	Diazonium ion
	mg/dl	1.51	1.19	1.83	0.16	0.32	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.13	1.92	2.34	0.11	0.21	NM-BAPTA
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Chloride	mmol/l	97.5	89.7	105	3.90	7.80	ISE indirect
Cholesterol	mmol/l	4.11	3.58	4.64	0.27	0.53	Cholesterol Oxidase
	mg/dl	159	138	180	10.50	21.00	
CK Total	U/l	192	157	227	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	120	98	142	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	82	67	97	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	121	96.6	145	12.20	24.40	Roche Creatinine Plus
	mg/dl	1.37	1.09	1.65	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	119	95.2	143	11.90	23.80	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.34	1.08	1.60	0.13	0.26	

## Roche Cobas C111®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
gamma-GT	U/l	55	46	64	4.50	9.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	43	36	50	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	34	28	40	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.45	5.49	7.41	0.48	0.96	Hexokinase
	mg/dl	116	98.9	133	8.55	17.10	
HDL - Cholesterol	mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	57.9	49.4	66.4	4.25	8.50	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
LD (LDH)	U/l	217	185	249	16.00	32.00	L->P IFCC 37°C
	U/l	157	134	180	11.50	23.00	L->P IFCC 30°C
	U/l	110	94	126	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	31	25	37	3.00	6.00	Roche Colorimetric 37°C
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	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.81	4.09	5.53	0.36	0.72	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	58.8	47.0	70.6	5.90	11.80	Biuret reaction end point
	g/dl	5.88	4.70	7.06	0.59	1.18	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect
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	



## Roche Cobas C111®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	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	
	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	101	84.5	118	8.25	16.50	
Urea	mmol/l	7.43	6.31	8.55	0.56	1.12	Urease kinetic
	mg/dl	44.7	37.9	51.5	3.40	6.80	
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Uric Acid (Urate)	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	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.21	6.79	0.40	0.79	
	mmol/l	0.35	0.30	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.11	6.65	0.39	0.77	

## Roche Cobas C311®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.8	38.1	51.5	3.35	6.70	Bromocresol Green
	g/dl	4.48	3.81	5.15	0.34	0.67	
	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	158	134	182	12.00	24.00	Roche Integra AMP buffer 37°C
	U/l	123	104	142	9.50	19.00	Roche Integra AMP buffer 30°C
	U/l	101	86	116	7.50	15.00	Roche Integra AMP buffer 25°C
	U/l	162	138	186	12.00	24.00	AMP optimised to IFCC 37°C
	U/l	126	108	144	9.00	18.00	AMP optimised to IFCC 30°C
	U/l	104	88	120	8.00	16.00	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
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Roche EPS Liquid 37°C
Amylase Total	U/l	90	76	104	7.00	14.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Tris buffer without P5P 37°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.6	14.7	22.5	1.95	3.90	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.09	0.860	1.32	0.12	0.23	

## Roche Cobas C311®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods	
			low	high				
Bilirubin Direct	µmol/l	18.5	14.6	22.4	1.95	3.90	Diazo with Sulphanilic Acid	
	mg/dl	1.08	0.854	1.31	0.11	0.23		
	µmol/l	18.2	14.3	22.1	1.95	3.90	Roche JG factored	
	mg/dl	1.06	0.837	1.28	0.11	0.22		
Bilirubin Total	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid	
	mg/dl	1.59	1.25	1.93	0.17	0.34		
	µmol/l	27.3	21.6	33.0	2.85	5.70	Dichlorophenyl Diazonium (DPD)	
	mg/dl	1.60	1.26	1.94	0.17	0.34		
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion	
	mg/dl	1.59	1.26	1.92	0.17	0.33		
	Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
		mg/dl	8.66	7.82	9.50	0.42	0.84	
mmol/l		2.15	1.93	2.37	0.11	0.22	Arsenazo III	
mg/dl		8.62	7.74	9.50	0.44	0.88		
	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA	
	mg/dl	8.66	7.78	9.54	0.44	0.88		
	Chloride	mmol/l	91.3	84.0	98.6	3.65	7.30	ISE indirect
	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	4627	3701	5553	463.00	926.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C	
	U/l	125	103	147	11.00	22.00	CK-NAC substrate start (DGKC) 30°C	
	U/l	85	70	100	7.50	15.00	CK-NAC substrate start (DGKC) 25°C	
	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C	
	U/l	125	102	148	11.50	23.00	CK-NAC (IFCC) 30°C	
	U/l	85	69	101	8.00	16.00	CK-NAC (IFCC) 25°C	

## Roche Cobas C311®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Analyte	unit	Target	Range		1SD	2SD	methods
			low	high			
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.45	1.16	1.74	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	42	35	49	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	33	28	38	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	58	49	67	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	36	30	42	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.38	5.42	7.34	0.48	0.96	Hexokinase
	mg/dl	115	97.7	132	8.65	17.30	
	mmol/l	6.43	5.47	7.39	0.48	0.96	Glucose oxidase
	mg/dl	116	98.6	133	8.70	17.40	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL Roche 3rd generation
	mg/dl	56.7	48.3	65.1	4.20	8.40	
Iron	µmol/l	18.0	14.8	21.2	1.60	3.20	Colorimetric with ppt.
	µg/dl	101	82.7	119	9.15	18.30	

## Roche Cobas C311®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	83.3	119	8.85	17.70	
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	396	337	455	29.50	59.00	P->L German methods 37°C
	U/l	286	243	329	21.50	43.00	P->L German methods 30°C
	U/l	201	171	231	15.00	30.00	P->L German methods 25°C
	U/l	209	177	241	16.00	32.00	L->P IFCC 37°C
	U/l	151	128	174	11.50	23.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	28	23	33	2.50	5.00	Roche Colorimetric 37°C
	U/l	28	23	33	2.50	5.00	Roche Turbidimetric with colipase 37°C
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	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Osmolality	mOsm/kg	291	233	349	29.00	58.00	Calculated
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	1.48	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	4.05	3.72	4.38	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.5	69.7	5.80	11.60	Biuret reaction end point
	g/dl	5.81	4.65	6.97	0.58	1.16	

## Roche Cobas C311®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Protein Total	g/l	57.8	46.2	69.4	5.80	11.60	Biuret reaction kinetic
	g/dl	5.78	4.62	6.94	0.58	1.16	
Sodium	mmol/l	145	138	152	3.50	7.00	ISE method - indirect
TIBC	µmol/l	35.5	28.0	43.0	3.75	7.50	FE+UIBC(saturation with iron)
	µg/dl	198	157	239	20.50	41.00	
	µmol/l	34.5	27.3	41.7	3.60	7.20	Direct Colorimetric
	µg/dl	193	153	233	20.00	40.00	
Triglycerides	mmol/l	1.14	0.96	1.33	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	101	84.5	118	8.25	16.50	
	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	104	86.6	121	8.70	17.40	
	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	17.4	14.2	20.6	1.60	3.20	Direct Colorimetric
	µg/dl	97.3	79.4	115	8.95	17.90	
Urea	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease end point
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.66	6.51	8.81	0.58	1.15	Urease kinetic
	mg/dl	46.0	39.1	52.9	3.45	6.90	
	mmol/l	7.66	6.51	8.81	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.21	6.79	0.40	0.79	

**Roche Cobas C311®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.7	38.0	51.4	3.35	6.70	Bromocresol Green
	g/dl	4.47	3.80	5.14	0.34	0.67	
Alkaline Phosphatase	U/l	156	133	179	11.50	23.00	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	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	31	24	38	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	67	57	77	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	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	16.0	12.7	19.3	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	18.0	14.3	21.7	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.837	1.26	0.11	0.21	
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	
	µmol/l	26.4	20.8	32.0	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazonium ion
	mg/dl	1.56	1.23	1.89	0.17	0.33	



## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods	
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Cresolphthalein complexone	
	mg/dl	8.58	7.74	9.42	0.42	0.84		
	mmol/l	2.15	1.94	2.36	0.11	0.21	NM-BAPTA	
	mg/dl	8.62	7.78	9.46	0.42	0.84		
Chloride	mmol/l	92.5	85.1	99.9	3.70	7.40	ISE indirect	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase	
	mg/dl	158	137	179	10.50	21.00		
Cholinesterase	U/l	4720	3776	5664	472.00	944.00	Colorimetric Butyrylthiocholine 37°C	
CK Total	U/l	191	156	226	17.50	35.00	CK-NAC substrate start (DGKC) 37°C	
	U/l	120	98	142	11.00	22.00	CK-NAC substrate start (DGKC) 30°C	
	U/l	81	66	96	7.50	15.00	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	
Creatinine	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus	
	mg/dl	1.47	1.18	1.76	0.15	0.29		
	µmol/l	134	108	160	13.00	26.00	Jaffe rate blanked	
	mg/dl	1.51	1.22	1.80	0.15	0.29		
	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		
	µmol/l	134	107	161	13.50	27.00	IDMS traceable	
	mg/dl	1.51	1.21	1.81	0.15	0.30		
	gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
		U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
U/l		36	31	41	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Hexokinase
	mg/dl	115	98.0	132	8.50	17.00	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL Roche 3rd generation
	mg/dl	59.1	50.2	68.0	4.45	8.90	
Iron	µmol/l	17.5	14.3	20.7	1.60	3.20	Colorimetric without ppt.
	µg/dl	97.8	79.9	116	8.95	17.90	
LD (LDH)	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
	U/l	151	129	173	11.00	22.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	28	23	33	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	1.93	2.45	0.13	0.26	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Chlorphosphonazo III
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	
Potassium	mmol/l	4.06	3.73	4.39	0.17	0.33	ISE method - indirect
Protein Total	g/l	58.1	46.4	69.8	5.85	11.70	Biuret reaction end point
	g/dl	5.81	4.64	6.98	0.59	1.17	
Sodium	mmol/l	146	139	153	3.50	7.00	ISE method - indirect
TIBC	µmol/l	35.7	28.2	43.2	3.75	7.50	FE+UIBC(saturation with iron)
	µg/dl	200	158	242	21.00	42.00	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	84.7	117	8.15	16.30	

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	102	85.6	118	8.20	16.40	
	mmol/l	1.13	0.95	1.31	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	100	84.3	116	7.85	15.70	
Urea	mmol/l	7.48	6.35	8.61	0.57	1.13	Urease kinetic
	mg/dl	45.0	38.2	51.8	3.40	6.80	
	mmol/l	7.48	6.36	8.60	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	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	5.09	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	5.83	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	5.80	5.04	6.56	0.38	0.76	

## RX SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	42.3	36.0	48.6	3.15	6.30	Bromocresol Green
	g/dl	4.23	3.60	4.86	0.32	0.63	
Alkaline Phosphatase	U/l	331	281	381	25.00	50.00	Diethanolamine buffer DEA 37°C
	U/l	203	173	233	15.00	30.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	77	65	89	6.00	12.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	96	82	110	7.00	14.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	16.2	12.8	19.6	1.70	3.40	Enzymatic
Bile Acids	µmol/l	23.1	18.5	27.7	2.30	4.60	5th Generation Colorimetric
Bilirubin Direct	µmol/l	19.6	15.5	23.7	2.05	4.10	Diazo with Sulphanilic Acid
	mg/dl	1.15	0.907	1.39	0.12	0.24	
	µmol/l	16.2	12.8	19.6	1.70	3.40	Oxidation to Biliverdin/Vanadate
	mg/dl	0.948	0.749	1.15	0.10	0.20	
Bilirubin Total	µmol/l	32.5	25.7	39.3	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	µmol/l	31.2	24.6	37.8	3.30	6.60	Oxidation to Biliverdin/Vanadate
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Calcium	mmol/l	2.23	2.01	2.45	0.11	0.22	Arsenazo III
	mg/dl	8.94	8.06	9.82	0.44	0.88	
Chloride	mmol/l	94.3	86.8	102	3.75	7.50	ISE direct

## RX SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.50	3.92	5.08	0.29	0.58	Cholesterol Oxidase
	mg/dl	174	151	197	11.50	23.00	
CK Total	U/l	219	180	258	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	238	195	281	21.50	43.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	121	96.7	145	12.15	24.30	Enzymatic UV method
mg/dl	1.37	1.09	1.65	0.14	0.28		
D-3-Hydroxybutyrate	mmol/l	0.29	0.25	0.34	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	60	51	69	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.82	5.80	7.84	0.51	1.02	Hexokinase
	mg/dl	123	105	141	9.00	18.00	
	mmol/l	6.81	5.79	7.83	0.51	1.02	Glucose oxidase
	mg/dl	123	104	142	9.50	19.00	
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	1.48	1.21	1.75	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.3	10.9	15.7	1.20	2.40	
LD (LDH)	U/l	408	347	469	30.50	61.00	P->L German methods 37°C
	U/l	205	175	235	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Colorimetric
	mg/dl	0.715	0.629	0.801	0.04	0.09	
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	

## RX SERIES®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### 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	3.95	3.63	4.27	0.16	0.32	Enzymatic
	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - direct
Protein Total	g/l	59.7	47.8	71.6	5.95	11.90	Biuret reaction end point
	g/dl	5.97	4.78	7.16	0.60	1.19	
Sodium	mmol/l	144	137	151	3.50	7.00	Enzymatic
	mmol/l	143	136	150	3.50	7.00	ISE method - direct
TIBC	µmol/l	42.5	33.6	51.4	4.45	8.90	Direct Colorimetric
	µg/dl	238	188	288	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	83.9	116	8.05	16.10	
Urea	mmol/l	7.63	6.49	8.77	0.57	1.14	Urease kinetic
	mg/dl	45.9	39.0	52.8	3.45	6.90	
	mmol/l	7.63	6.49	8.77	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	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 1200/1650/1800/240**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**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	237	201	273	18.00	36.00	Diethanolamine buffer DEA 37°C
	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	73	62	84	5.50	11.00	Immuno-inhibition EPS substrate 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	Siemens - blocked pNPG7 37°C
	U/l	92	78	106	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	17.2	13.6	20.8	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	16.8	13.3	20.3	1.75	3.50	Oxidation to Biliverdin/Vanadate
	mg/dl	0.983	0.778	1.19	0.10	0.21	
Bilirubin Total	µmol/l	30.1	23.8	36.4	3.15	6.30	Diazo with Sulphanilic Acid
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	31.0	24.5	37.5	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	1.43	2.19	0.19	0.38	
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	
	mmol/l	2.17	1.95	2.39	0.11	0.22	Arsenazo III
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Chloride	mmol/l	96.7	89.0	104	3.85	7.70	ISE indirect

**SIEMENS ATELLICA / ADVIA 1200/1650/1800/240**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	4.23	3.68	4.78	0.28	0.55	Cholesterol Oxidase
	mg/dl	163	142	184	10.50	21.00	
Cholinesterase	U/l	5531	4425	6637	553.00	1106.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	181	148	214	16.50	33.00	CK-NAC substrate start (DGKC) 37°C
	U/l	201	165	237	18.00	36.00	
Creatinine	µmol/l	133	107	159	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	119	95.3	143	11.85	23.70	Creatinine PAP method
	mg/dl	1.34	1.08	1.60	0.13	0.26	
	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)	
mg/dl	1.49	1.20	1.78	0.15	0.29		
gamma-GT	U/l	59	50	68	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Hexokinase
	mg/dl	113	95.9	130	8.55	17.10	
	mmol/l	6.43	5.46	7.40	0.49	0.97	Glucose oxidase
	mg/dl	116	98.4	134	8.80	17.60	
HDL - Cholesterol	mmol/l	1.20	1.02	1.38	0.09	0.18	Direct HDL Immunoseparation
	mg/dl	46.3	39.4	53.2	3.45	6.90	
	mmol/l	1.24	1.06	1.42	0.09	0.18	Direct Clearance Method
	mg/dl	47.9	40.9	54.9	3.50	7.00	



**SIEMENS ATELLICA / ADVIA 1200/1650/1800/240**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric with ppt.
	µg/dl	101	82.7	119	9.15	18.30	
	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
Lactate	mmol/l	1.41	1.15	1.67	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	12.7	10.4	15.0	1.15	2.30	
LD (LDH)	U/l	207	176	238	15.50	31.00	L->P 37°C
	U/l	402	342	462	30.00	60.00	P->L German methods 37°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	38	30	46	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.03	0.91	1.15	0.06	0.12	Spectrophotometric
	mg/dl	0.715	0.629	0.801	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.50	1.27	1.73	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.65	3.94	5.36	0.36	0.71	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
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	
	g/l	57.6	46.1	69.1	5.75	11.50	Biuret reaction kinetic
	g/dl	5.76	4.61	6.91	0.58	1.15	
Sodium	mmol/l	146	138	154	4.00	8.00	ISE method - indirect
TIBC	µmol/l	41.6	32.9	50.3	4.35	8.70	Removal of excess free iron
	µg/dl	233	184	282	24.50	49.00	

**SIEMENS ATELLICA / ADVIA 1200/1650/1800/240**
**ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
TIBC	µmol/l	42.4	33.5	51.3	4.45	8.90	FE+UIBC(saturation with iron)
	µg/dl	237	187	287	25.00	50.00	
	µmol/l	42.3	33.4	51.2	4.45	8.90	Direct Colorimetric
	µg/dl	236	187	285	24.50	49.00	
Triglycerides	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.7	121	8.65	17.30	
	mmol/l	1.21	1.01	1.41	0.10	0.20	L/G Kinase EP. no correction
	mg/dl	107	89.4	125	8.80	17.60	
Urea	mmol/l	7.75	6.58	8.92	0.59	1.17	Urease end point
	mg/dl	46.6	39.5	53.7	3.55	7.10	
	mmol/l	7.77	6.60	8.94	0.59	1.17	Urease kinetic
	mg/dl	46.7	39.7	53.7	3.50	7.00	
	mmol/l	7.77	6.60	8.94	0.59	1.17	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	
Uric Acid (Urate)	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	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.98	5.21	6.75	0.39	0.77	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	6.00	5.21	6.79	0.40	0.79	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.3	37.6	51.0	3.35	6.70	Bromocresol Green
	g/dl	4.43	3.76	5.10	0.34	0.67	
	g/l	44.5	37.8	51.2	3.35	6.70	Bromocresol Purple
	g/dl	4.45	3.78	5.12	0.34	0.67	
Alkaline Phosphatase	U/l	173	147	199	13.00	26.00	Siemens Dimension AMP buffer 37°C
	U/l	171	146	196	12.50	25.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	49	39	59	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	101	86	116	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	54	44	64	5.00	10.00	Tris buffer with P5P 37°C
	U/l	54	43	65	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.8	13.3	20.3	1.75	3.50	Enzymatic
Bilirubin Direct	µmol/l	12.0	9.48	14.5	1.26	2.52	Diazo with Sulphanilic Acid
	mg/dl	0.702	0.555	0.849	0.07	0.15	
Bilirubin Total	µmol/l	29.4	23.2	35.6	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.72	1.36	2.08	0.18	0.36	
Calcium	mmol/l	2.06	1.85	2.27	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.26	7.41	9.11	0.43	0.85	
Chloride	mmol/l	96.6	88.9	104	3.85	7.70	ISE indirect
Cholesterol	mmol/l	3.74	3.26	4.22	0.24	0.48	Cholesterol Oxidase
	mg/dl	144	126	162	9.00	18.00	

## SIEMENS DIMENSION EXL®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Cholesterol	mmol/l	3.78	3.29	4.27	0.25	0.49	Dimension-Siemens reagents
	mg/dl	146	127	165	9.50	19.00	
Cholinesterase	U/l	8594	6875	10313	859.50	1719.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	125	100	150	12.50	25.00	Enzymatic UV method
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	132	105	159	13.50	27.00	Jaffe rate blanked
	mg/dl	1.49	1.19	1.79	0.15	0.30	
IDMS traceable	µmol/l	126	101	151	12.50	25.00	
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	67	57	77	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	72	61	83	5.50	11.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.53	5.55	7.51	0.49	0.98	Hexokinase
	mg/dl	118	100	136	9.00	18.00	
HDL - Cholesterol	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL PPD
	mg/dl	56.0	47.5	64.5	4.25	8.50	
	mmol/l	1.45	1.23	1.67	0.11	0.22	Direct HDL PEGME
	mg/dl	56.0	47.5	64.5	4.25	8.50	
Iron	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric with ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	
	µmol/l	17.0	14.0	20.0	1.50	3.00	Colorimetric without ppt.
	µg/dl	95.0	78.3	112	8.35	16.70	
LD (LDH)	U/l	203	172	234	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C

## SIEMENS DIMENSION EXL®

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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
LD (LDH)	U/l	198	168	228	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	122	98	146	12.00	24.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Methylthymol blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.71	4.00	5.42	0.36	0.71	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate UV
mg/dl	4.71	4.00	5.42	0.36	0.71		
Potassium	mmol/l	3.93	3.61	4.25	0.16	0.32	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	
PSA Total	ng/ml =	12.1	9.10	15.1	1.50	3.00	Siemens Dimension
Sodium	mmol/l	145	137	153	4.00	8.00	ISE method - indirect
TIBC	µmol/l	31.4	24.8	38.0	3.30	6.60	FE+UIBC(saturation with iron)
	µg/dl	176	139	213	18.50	37.00	
	µmol/l	31.9	25.2	38.6	3.35	6.70	Direct Colorimetric
	µg/dl	178	141	215	18.50	37.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
	mmol/l	1.06	0.89	1.23	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	93.8	78.9	109	7.45	14.90	
	mmol/l	1.06	0.89	1.23	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.6	109	7.60	15.20	
Urea	mmol/l	7.60	6.46	8.74	0.57	1.14	Urease end point
	mg/dl	45.7	38.8	52.6	3.45	6.90	

**SIEMENS DIMENSION EXL®**

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.74	6.58	8.90	0.58	1.16	Urease kinetic
	mg/dl	46.5	39.5	53.5	3.50	7.00	
	mmol/l	7.74	6.58	8.90	0.58	1.16	BUN
	mg/dl	21.7	18.4	25.0	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase catalase 340nm
	mg/dl	6.06	5.28	6.84	0.39	0.78	
	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	0.36	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
mg/dl	6.00	5.21	6.79	0.40	0.79		

## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	43.6	37.0	50.2	3.30	6.60	Bromocresol Green
	g/dl	4.36	3.70	5.02	0.33	0.66	
	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	
Alkaline Phosphatase	U/l	170	145	195	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	173	147	199	13.00	26.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	50	40	60	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	101	85	117	8.00	16.00	Siemens - maltopenta/hexaoside 37°C
	U/l	100	85	115	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	17.3	13.7	20.9	1.80	3.60	Enzymatic
Bilirubin Direct	µmol/l	12.0	9.51	14.5	1.25	2.49	Diazo with Sulphanilic Acid
	mg/dl	0.702	0.556	0.848	0.07	0.15	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.04	1.84	2.24	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.18	7.37	8.99	0.41	0.81	
	mmol/l	2.05	1.85	2.25	0.10	0.20	Arsenazo III
	mg/dl	8.22	7.41	9.03	0.41	0.81	


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

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Chloride	mmol/l	95.8	88.2	103	3.80	7.60	ISE indirect
Cholesterol	mmol/l	3.76	3.27	4.25	0.25	0.49	Cholesterol Oxidase
	mg/dl	145	126	164	9.50	19.00	
	mmol/l	3.76	3.27	4.25	0.25	0.49	Dimension-Siemens reagents
	mg/dl	145	126	164	9.50	19.00	
Cholinesterase	U/l	8541	6833	10249	854.00	1708.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	192	158	226	17.00	34.00	CK-NAC (IFCC) 37°C
	U/l	180	148	212	16.00	32.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	184	150	218	17.00	34.00	Creatinine phosphate substrate Start 37°C
Creatinine	µmol/l	133	107	159	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.50	1.21	1.79	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Creatinine PAP method
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	66	56	76	5.00	10.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	72	61	83	5.50	11.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.61	5.62	7.60	0.50	0.99	Glucose dehydrogenase
	mg/dl	119	101	137	9.00	18.00	



## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Glucose	mmol/l	6.57	5.58	7.56	0.50	0.99	Hexokinase
	mg/dl	118	101	135	8.50	17.00	
	mmol/l	6.37	5.41	7.33	0.48	0.96	Glucose oxidase
	mg/dl	115	97.5	133	8.75	17.50	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PPD
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL Immunoseparation
	mg/dl	59.1	50.2	68.0	4.45	8.90	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PEGME
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.36	1.15	1.57	0.11	0.21	Direct Clearance Method
	mg/dl	52.5	44.4	60.6	4.05	8.10	
	mmol/l	1.38	1.17	1.59	0.11	0.21	HDL - Ultra
	mg/dl	53.3	45.2	61.4	4.05	8.10	
Iron	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric with ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	
	µmol/l	17.1	14.1	20.1	1.50	3.00	Colorimetric without ppt.
	µg/dl	95.6	78.8	112	8.40	16.80	
Lactate	mmol/l	1.67	1.37	1.97	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	15.0	12.3	17.7	1.35	2.70	
	mmol/l	1.49	1.22	1.76	0.14	0.27	UV LDH
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	191	162	220	14.50	29.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	198	169	227	14.50	29.00	L->P IFCC 37°C
Lipase	U/l	125	100	150	12.50	25.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C

## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

Size: 20 x 5ml / 5 x 5ml Expiry: 2022-06-28

Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Magnesium	mmol/l	0.82	0.72	0.92	0.05	0.10	Xylidyl Blue
	mg/dl	2.00	1.76	2.24	0.12	0.24	
	mmol/l	0.88	0.77	0.98	0.05	0.11	Methylthymol blue
	mg/dl	2.13	1.88	2.38	0.13	0.25	
Phosphate Inorganic	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate enzymatic
	mg/dl	4.71	4.00	5.42	0.36	0.71	
	mmol/l	1.52	1.29	1.75	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.71	4.00	5.42	0.36	0.71	
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.8	47.8	71.8	6.00	12.00	Biuret reaction end point
	g/dl	5.98	4.78	7.18	0.60	1.20	
Sodium	mmol/l	143	136	150	3.50	7.00	ISE method - indirect
TIBC	µmol/l	31.3	24.7	37.9	3.30	6.60	Removal of excess free iron
	µg/dl	175	138	212	18.50	37.00	
	µmol/l	31.9	25.2	38.6	3.35	6.70	FE+UIBC(saturation with iron)
	µg/dl	178	141	215	18.50	37.00	
	µmol/l	31.6	24.9	38.3	3.35	6.70	Direct Colorimetric
	µg/dl	177	139	215	19.00	38.00	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.4	110	7.65	15.30	
	mmol/l	1.07	0.90	1.24	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.7	110	7.50	15.00	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	78.9	109	7.45	14.90	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease end point
	mg/dl	44.5	37.9	51.1	3.30	6.60	

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Analyte	unit	Target	low	high	1SD	2SD	methods
Urea	mmol/l	7.76	6.60	8.92	0.58	1.16	Urease kinetic
	mg/dl	46.6	39.7	53.5	3.45	6.90	
	mmol/l	7.76	6.60	8.92	0.58	1.16	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase catalase 340nm
	mg/dl	6.01	5.22	6.80	0.40	0.79	
	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	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.03	5.24	6.82	0.40	0.79	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.98	5.19	6.77	0.40	0.79	

## SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)

Lot. No. 1308UN Cat. No. HN1530 / HS2611

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Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	44.1	37.5	50.7	3.30	6.60	Bromocresol Purple
	g/dl	4.41	3.75	5.07	0.33	0.66	
Alkaline Phosphatase	U/l	169	144	194	12.50	25.00	Siemens Dimension AMP buffer 37°C
	U/l	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	38	58	5.00	10.00	Tris buffer with P5P 37°C
	U/l	47	37	57	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	98	83	113	7.50	15.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	55	44	66	5.50	11.00	Tris buffer with P5P 37°C
	U/l	55	44	66	5.50	11.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	16.2	12.8	19.6	1.70	3.40	Enzymatic
Bilirubin Direct	µmol/l	12.7	10.0	15.4	1.35	2.70	Diazo with Sulphanilic Acid
	mg/dl	0.743	0.585	0.901	0.08	0.16	
Bilirubin Total	µmol/l	29.3	23.1	35.5	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.71	1.35	2.07	0.18	0.36	
Calcium	mmol/l	2.05	1.85	2.25	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.22	7.41	9.03	0.41	0.81	
Chloride	mmol/l	98.8	90.9	107	3.95	7.90	ISE indirect
Cholesterol	mmol/l	3.70	3.22	4.18	0.24	0.48	Dimension-Siemens reagents
	mg/dl	143	124	162	9.50	19.00	
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	

## SIEMENS DIMENSION Vista®

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
gamma-GT	U/l	70	59	81	5.50	11.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	69	59	79	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.33	5.38	7.28	0.48	0.95	Hexokinase
	mg/dl	114	96.9	131	8.55	17.10	
HDL - Cholesterol	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PPD
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct HDL PEGME
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	17.7	14.5	20.9	1.60	3.20	Colorimetric with ppt.
	µg/dl	98.9	81.1	117	8.90	17.80	
	µmol/l	17.5	14.3	20.7	1.60	3.20	Colorimetric without ppt.
	µg/dl	97.8	79.9	116	8.95	17.90	
Lactate	mmol/l	1.66	1.36	1.96	0.15	0.30	UV LDH
	mg/dl	15.0	12.3	17.7	1.35	2.70	
LD (LDH)	U/l	204	173	235	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	140	112	168	14.00	28.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Methylthymol blue
	mg/dl	2.24	1.97	2.51	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	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	61.0	48.8	73.2	6.10	12.20	Biuret reaction end point
	g/dl	6.10	4.88	7.32	0.61	1.22	
Sodium	mmol/l	144	137	151	3.50	7.00	ISE method - indirect

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### Range

Analyte	unit	Target	low	high	1SD	2SD	methods
Triglycerides	mmol/l	1.23	1.03	1.43	0.10	0.20	Lipase/GPO-PAP no correction
	mg/dl	109	91.2	127	8.90	17.80	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease kinetic
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.61	6.47	8.75	0.57	1.14	BUN
	mg/dl	21.4	18.2	24.6	1.60	3.20	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.15	5.34	6.96	0.41	0.81	
	mmol/l	0.37	0.32	0.41	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	6.17	5.38	6.96	0.40	0.79	

**VITALAB FLEXOR®****ASSAYED HUMAN SERA LEVEL 2 (HUM ASY CONTROL 2)**

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**Range**

Analyte	unit	Target	low	high	1SD	2SD	methods
Albumin	g/l	45.2	38.4	52.0	3.40	6.80	Bromocresol Green
	g/dl	4.52	3.84	5.20	0.34	0.68	
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.16	3.62	4.70	0.27	0.54	Cholesterol Oxidase
	mg/dl	161	140	182	10.50	21.00	
gamma-GT	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose oxidase
	mg/dl	113	96.0	130	8.50	17.00	
Phosphate Inorganic	mmol/l	1.55	1.32	1.78	0.12	0.23	Phosphomolybdate UV
	mg/dl	4.81	4.09	5.53	0.36	0.72	
Protein Total	g/l	58.7	46.9	70.5	5.90	11.80	Biuret reaction end point
	g/dl	5.87	4.69	7.05	0.59	1.18	
Urea	mmol/l	7.76	6.60	8.92	0.58	1.16	Urease kinetic
	mg/dl	46.6	39.7	53.5	3.45	6.90	
	mmol/l	7.76	6.60	8.92	0.58	1.16	BUN
	mg/dl	21.8	18.5	25.1	1.65	3.30	