# PRODUCT INFORMATION

HE1532

1309UE

Please note that for 1309UE - Human Assayed Sera Level 3, the following values are currently unavailable and will be updated in due course:

**METHOD (Elec.)**

Albumin (electrophoresis)
alpha-1-globulin
alpha-1-globulin
beta-globulin
gamma-globulin

**METHOD**

NEFA

CCS INC120 & CCS INC181



FORM NO. 8373-GP
REVISION (2)
2 Aug 2019

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

**CAT. NO.** HE1532 **GTIN:** 05055273203608 **SIZE:** 20 x 5ml
**CAT. NO.** HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
**LOT NO.** 1309UE **EXPIRY:** 2026-10-28

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

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

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

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

Health and Safety Data Sheets are available on request.

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

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

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

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

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

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

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

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

## MATERIALS PROVIDED
Human Assayed Multi-sera - Level 3 20 x 5ml / 5 x 5ml

## MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

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

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

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

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

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

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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 29.5 | 25.1 | 33.9 | 2.20 | 4.40 | Bromocresol Green |
| | g/dl | 2.95 | 2.51 | 3.39 | 0.22 | 0.44 | |
| | g/l | 27.5 | 23.4 | 31.6 | 2.05 | 4.10 | Bromocresol Purple |
| | g/dl | 2.75 | 2.34 | 3.16 | 0.21 | 0.41 | |
| | g/l | 29.2 | 24.8 | 33.6 | 2.20 | 4.40 | Ortho Vitros Microslide Systems |
| | g/dl | 2.92 | 2.48 | 3.36 | 0.22 | 0.44 | |
| | g/l | 29.3 | 24.9 | 33.7 | 2.20 | 4.40 | Turbidimetric Assays |
| | g/dl | 2.93 | 2.49 | 3.37 | 0.22 | 0.44 | |
| Alkaline Phosphatase | U/l | 280 | 238 | 322 | 21.00 | 42.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 424 | 360 | 488 | 32.00 | 64.00 | Diethanolamine buffer DEA 37°C |
| | U/l | 330 | 280 | 380 | 25.00 | 50.00 | Diethanolamine buffer DEA 30°C |
| | U/l | 271 | 230 | 312 | 20.50 | 41.00 | Diethanolamine buffer DEA 25°C |
| | U/l | 345 | 293 | 397 | 26.00 | 52.00 | AMP optimised to IFCC 37°C |
| | U/l | 269 | 228 | 310 | 20.50 | 41.00 | AMP optimised to IFCC 30°C |
| | U/l | 220 | 187 | 253 | 16.50 | 33.00 | AMP optimised to IFCC 25°C |
| | U/l | 344 | 293 | 395 | 25.50 | 51.00 | AMP non-optimised 37°C |
| | U/l | 268 | 228 | 308 | 20.00 | 40.00 | AMP non-optimised 30°C |
| | U/l | 220 | 187 | 253 | 16.50 | 33.00 | AMP non-optimised 25°C |
| | U/l | 333 | 283 | 383 | 25.00 | 50.00 | Colorimetric 37°C |
| | U/l | 259 | 220 | 298 | 19.50 | 39.00 | Colorimetric 30°C |
| | U/l | 213 | 181 | 245 | 16.00 | 32.00 | Colorimetric 25°C |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| ALT (GPT) | U/l | 140 | 112 | 168 | 14.00 | 28.00 | Colorimetric 37°C |
| | U/l | 104 | 83 | 125 | 10.50 | 21.00 | Colorimetric 30°C |
| | U/l | 79 | 63 | 95 | 8.00 | 16.00 | Colorimetric 25°C |
| | U/l | 145 | 116 | 174 | 14.50 | 29.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 144 | 115 | 173 | 14.50 | 29.00 | Tris buffer with P5P 37°C |
| | U/l | 107 | 85 | 129 | 11.00 | 22.00 | Tris buffer with P5P 30°C |
| | U/l | 81 | 65 | 97 | 8.00 | 16.00 | Tris buffer with P5P 25°C |
| | U/l | 137 | 110 | 164 | 13.50 | 27.00 | Tris buffer without P5P 37°C |
| | U/l | 101 | 81 | 121 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 77 | 62 | 92 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| | U/l | 141 | 113 | 169 | 14.00 | 28.00 | Tris buffer with P5P NVKC 37°C |
| | U/l | 104 | 84 | 124 | 10.00 | 20.00 | Tris buffer with P5P NVKC 30°C |
| | U/l | 79 | 64 | 94 | 7.50 | 15.00 | Tris buffer with P5P NVKC 25°C |
| | U/l | 133 | 106 | 160 | 13.50 | 27.00 | Tris buffer SCE 37°C |
| | U/l | 98 | 78 | 118 | 10.00 | 20.00 | Tris buffer SCE 30°C |
| | U/l | 75 | 60 | 90 | 7.50 | 15.00 | Tris buffer SCE 25°C |
| | U/l | 144 | 115 | 173 | 14.50 | 29.00 | Ortho Vitros MicroSlide visible 37°C |
| Amylase Pancreatic | U/l | 242 | 206 | 278 | 18.00 | 36.00 | Immunoinhibition EPS substrate 37°C |
| | U/l | 235 | 200 | 270 | 17.50 | 35.00 | Roche EPS Liquid 37°C |
| | U/l | 271 | 230 | 312 | 20.5 | 41.0 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 279 | 237 | 321 | 21.00 | 42.00 | pNP Maltotrioside substrates 37°C |
| | U/l | 293 | 249 | 337 | 22.00 | 44.00 | Siemens - blocked pNPG7 37°C |
| | U/l | 223 | 190 | 256 | 16.50 | 33.00 | Randox Lyo. Ethylidene pNPG7 37°C |
| | U/l | 294 | 250 | 338 | 22.00 | 44.00 | Randox Liquid Ethylidene pNPG7 37°C |
| | U/l | 310 | 264 | 356 | 23.00 | 46.00 | Siemens 2-chloro-pNP linked substrate 37°C |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Amylase Total | U/l | 262 | 223 | 301 | 19.50 | 39.00 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 169 | 144 | 194 | 12.50 | 25.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 263 | 224 | 302 | 19.50 | 39.00 | Other Roche 2-chloro-pNPG7 37°C |
| | U/l | 260 | 221 | 299 | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C |
| | U/l | 315 | 268 | 362 | 23.50 | 47.00 | Siemens 2-chloro-pNPG3 37°C |
| | U/l | 287 | 244 | 330 | 21.50 | 43.00 | bioMerieux 2-chloro-pNPG3 37°C |
| | U/l | 275 | 234 | 316 | 20.50 | 41.00 | Beckman Coulter - blocked pNPG7 37°C |
| | U/l | 279 | 237 | 321 | 21.00 | 42.00 | Beckman Synchron AMY7 37°C |
| | U/l | 281 | 239 | 323 | 21.00 | 42.00 | I.L. 2-chloro-pNPG3 37°C |
| | U/l | 309 | 262 | 356 | 23.50 | 47.00 | Abbott Architect / Alinity cal factor 3806 37°C |
| | U/l | 292 | 248 | 336 | 22.00 | 44.00 | Abbott Architect / Alinity cal factor 3431 37°C |
| | U/l | 274 | 233 | 315 | 20.50 | 41.00 | Beckman CNPG3 (Extinction Coeff) 37°C |
| | U/l | 259 | 220 | 298 | 19.50 | 39.00 | BM/Roche Colorimetric pNPG7 37°C |
| Apolipoprotein A-1 | g/l | 1.07 | 0.88 | 1.26 | 0.10 | 0.19 | Immunoturbidimetric |
| | mg/dl | 107 | 87.7 | 126 | 9.65 | 19.30 | |
| Apolipoprotein B | g/l | 0.65 | 0.53 | 0.76 | 0.06 | 0.12 | Immunoturbidimetric |
| | mg/dl | 64.6 | 53.0 | 76.2 | 5.80 | 11.60 | |
| Acid Phosphatase (Total) | U/l | 39.2 | 26.3 | 52.1 | 6.45 | 12.90 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| AST (GOT) | U/l | 153 | 122 | 184 | 15.50 | 31.00 | Colorimetric 37°C |
| | U/l | 103 | 82 | 124 | 10.50 | 21.00 | Colorimetric 30°C |
| | U/l | 73 | 58 | 88 | 7.50 | 15.00 | Colorimetric 25°C |
| | U/l | 192 | 154 | 230 | 19.00 | 38.00 | Ortho Vitros Microslide visible slide 37°C |
| | U/l | 174 | 139 | 209 | 17.50 | 35.00 | Tris buffer with P5P 37°C |
| | U/l | 118 | 94 | 142 | 12.00 | 24.00 | Tris buffer with P5P 30°C |
| | U/l | 83 | 66 | 100 | 8.50 | 17.00 | Tris buffer with P5P 25°C |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| AST (GOT) | U/l | 150 | 120 | 180 | 15.00 | 30.00 | Tris buffer without P5P 37°C |
| | U/l | 101 | 81 | 121 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 71 | 57 | 85 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| | U/l | 159 | 127 | 191 | 16.00 | 32.00 | Phosphate buffer DGKC 37°C |
| | U/l | 107 | 86 | 128 | 10.50 | 21.00 | Phosphate buffer DGKC 30°C |
| | U/l | 76 | 60 | 92 | 8.00 | 16.00 | Phosphate buffer DGKC 25°C |
| | U/l | 151 | 121 | 181 | 15.00 | 30.00 | Tris buffer with P5P NVKC 37°C |
| | U/l | 102 | 82 | 122 | 10.00 | 20.00 | Tris buffer with P5P NVKC 30°C |
| | U/l | 72 | 58 | 86 | 7.00 | 14.00 | Tris buffer with P5P NVKC 25°C |
| | U/l | 153 | 122 | 184 | 15.50 | 31.00 | Tris buffer SCE 37°C |
| | U/l | 103 | 82 | 124 | 10.50 | 21.00 | Tris buffer SCE 30°C |
| | U/l | 73 | 58 | 88 | 7.50 | 15.00 | Tris buffer SCE 25°C |
| Bile Acids | µmol/l | 42.5 | 34.0 | 51.0 | 4.25 | 8.50 | 5th Generation Colorimetric |
| | µmol/l | 40.4 | 32.3 | 48.5 | 4.05 | 8.10 | 4th Generation Colorimetric |
| Bicarbonate | mmol/l | 16.3 | 12.9 | 19.7 | 1.70 | 3.40 | Colorimetric |
| | mmol/l | 17.3 | 13.7 | 20.9 | 1.80 | 3.60 | Ortho Vitros Microslide Systems |
| | mmol/l | 16.3 | 12.9 | 19.7 | 1.70 | 3.40 | Enzymatic |
| | mmol/l | 16.6 | 13.2 | 20.0 | 1.70 | 3.40 | Manometric |
| Bilirubin Direct | µmol/l | 27.5 | 21.7 | 33.3 | 2.90 | 5.80 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.61 | 1.27 | 1.95 | 0.17 | 0.34 | |
| | µmol/l | 28.4 | 22.4 | 34.4 | 3.00 | 6.00 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.66 | 1.31 | 2.01 | 0.18 | 0.35 | |
| | µmol/l | 29.0 | 22.9 | 35.1 | 3.05 | 6.10 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.70 | 1.34 | 2.06 | 0.18 | 0.36 | |
| | µmol/l | 32.3 | 25.5 | 39.1 | 3.40 | 6.80 | Modified Jendrassik |
| | mg/dl | 1.89 | 1.49 | 2.29 | 0.20 | 0.40 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 74.8 | 59.1 | 90.5 | 7.85 | 15.70 | Vitros 250/500/700/950 Total Bilirubin |
| | mg/dl | 4.38 | 3.46 | 5.30 | 0.46 | 0.92 | |
| | µmol/l | 86.0 | 67.9 | 104 | 9.05 | 18.10 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 5.03 | 3.97 | 6.09 | 0.53 | 1.06 | |
| | µmol/l | 79.1 | 62.5 | 95.7 | 8.30 | 16.60 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.63 | 3.66 | 5.60 | 0.49 | 0.97 | |
| | µmol/l | 77.4 | 61.2 | 93.6 | 8.10 | 16.20 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.53 | 3.58 | 5.48 | 0.48 | 0.95 | |
| | µmol/l | 78.2 | 61.8 | 94.6 | 8.20 | 16.40 | Nitrobenzenediazonium salt |
| | mg/dl | 4.57 | 3.62 | 5.52 | 0.48 | 0.95 | |
| | µmol/l | 77.6 | 61.3 | 93.9 | 8.15 | 16.30 | Diazonium ion |
| | mg/dl | 4.54 | 3.59 | 5.49 | 0.48 | 0.95 | |
| | µmol/l | 90.4 | 71.4 | 109 | 9.50 | 19.00 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 5.29 | 4.18 | 6.40 | 0.56 | 1.11 | |
| | µmol/l | 90.2 | 71.3 | 109 | 9.45 | 18.90 | Modified Jendrassik |
| | mg/dl | 5.28 | 4.17 | 6.39 | 0.56 | 1.11 | |
| Calcium | mmol/l | 3.09 | 2.78 | 3.40 | 0.16 | 0.31 | Cresolphthalein complexone |
| | mg/dl | 12.4 | 11.1 | 13.7 | 0.65 | 1.30 | |
| | mmol/l | 3.00 | 2.70 | 3.30 | 0.15 | 0.30 | Ortho Vitros Microslide Systems |
| | mg/dl | 12.0 | 10.8 | 13.2 | 0.60 | 1.20 | |
| | mmol/l | 3.06 | 2.75 | 3.37 | 0.16 | 0.31 | Ion selective electrode |
| | mg/dl | 12.3 | 11.0 | 13.6 | 0.65 | 1.30 | |
| | mmol/l | 3.08 | 2.77 | 3.39 | 0.16 | 0.31 | Methylthymol blue |
| | mg/dl | 12.3 | 11.1 | 13.5 | 0.60 | 1.20 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Calcium | mmol/l | 3.10 | 2.79 | 3.41 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.4 | 11.2 | 13.6 | 0.60 | 1.20 | |
| | mmol/l | 3.06 | 2.75 | 3.37 | 0.16 | 0.31 | Phosphonazo |
| | mg/dl | 12.3 | 11.0 | 13.6 | 0.65 | 1.30 | |
| | mmol/l | 3.11 | 2.80 | 3.42 | 0.16 | 0.31 | NM-BAPTA |
| | mg/dl | 12.5 | 11.2 | 13.8 | 0.65 | 1.30 | |
| Cholesterol | mmol/l | 7.12 | 6.19 | 8.05 | 0.47 | 0.93 | Ortho Vitros Microslide Systems |
| | mg/dl | 275 | 239 | 311 | 18.00 | 36.00 | |
| | mmol/l | 7.51 | 6.53 | 8.49 | 0.49 | 0.98 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 290 | 252 | 328 | 19.00 | 38.00 | |
| | mmol/l | 7.56 | 6.57 | 8.55 | 0.50 | 0.99 | Cholesterol Oxidase - IDMS |
| | mg/dl | 292 | 254 | 330 | 19.00 | 38.00 | |
| | mmol/l | 7.50 | 6.52 | 8.48 | 0.49 | 0.98 | Cholesterol Dehydrogenase |
| | mg/dl | 290 | 252 | 328 | 19.00 | 38.00 | |
| Chloride | mmol/l | 110 | 105 | 115 | 2.50 | 5.00 | Colorimetric |
| | mmol/l | 114 | 108 | 120 | 3.00 | 6.00 | Ortho Vitros Microslide Systems |
| | mmol/l | 112 | 106 | 118 | 3.00 | 6.00 | ISE indirect |
| | mmol/l | 113 | 107 | 119 | 3.00 | 6.00 | ISE direct |
| Cholinesterase | U/l | 4971 | 3977 | 5965 | 497.00 | 994.00 | Colorimetric Benzoylcholine 37°C |
| | U/l | 5134 | 4107 | 6161 | 513.50 | 1027.00 | Colorimetric Butyrylthiocholine 37°C |
| | U/l | 4895 | 3916 | 5874 | 489.50 | 979.00 | Ortho Vitros Microslide Systems 37°C |
| CK Total | U/l | 406 | 333 | 479 | 36.50 | 73.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 497 | 407 | 587 | 45.00 | 90.00 | CK-NAC serum start (DGKC) 37°C |
| | U/l | 311 | 255 | 367 | 28.00 | 56.00 | CK-NAC serum start (DGKC) 30°C |
| | U/l | 211 | 173 | 249 | 19.00 | 38.00 | CK-NAC serum start (DGKC) 25°C |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| CK Total | U/l | 495 | 406 | 584 | 44.50 | 89.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 310 | 254 | 366 | 28.00 | 56.00 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 210 | 173 | 247 | 18.50 | 37.00 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 493 | 404 | 582 | 44.50 | 89.00 | CK-NAC (IFCC) 37°C |
| | U/l | 309 | 253 | 365 | 28.00 | 56.00 | CK-NAC (IFCC) 30°C |
| | U/l | 210 | 172 | 248 | 19.00 | 38.00 | CK-NAC (IFCC) 25°C |
| | U/l | 536 | 439 | 633 | 48.50 | 97.00 | Monothioglycerol 37°C |
| | U/l | 336 | 275 | 397 | 30.50 | 61.00 | Monothioglycerol 30°C |
| | U/l | 228 | 187 | 269 | 20.50 | 41.00 | Monothioglycerol 25°C |
| | U/l | 494 | 405 | 583 | 44.50 | 89.00 | Dithioerythritol (DTE) IFCC correlated 37°C |
| | U/l | 309 | 254 | 364 | 27.50 | 55.00 | Dithioerythritol (DTE) IFCC correlated 30°C |
| | U/l | 210 | 172 | 248 | 19.00 | 38.00 | Dithioerythritol (DTE) IFCC correlated 25°C |
| Copper | µmol/l | 27.4 | 22.0 | 32.8 | 2.70 | 5.40 | Atomic absorption |
| | µg/dl | 174 | 140 | 208 | 17.00 | 34.00 | |
| | µmol/l | 25.0 | 20.0 | 30.0 | 2.50 | 5.00 | Colorimetric |
| | µg/dl | 159 | 127 | 191 | 16.00 | 32.00 | |
| Cortisol | nmol/l | 1072 | 804 | 1340 | 134.00 | 268.00 | Roche Cobas e402/e801 |
| | µg/dl | 38.6 | 28.9 | 48.3 | 4.85 | 9.70 | |
| Creatinine | µmol/l | 384 | 307 | 461 | 38.50 | 77.00 | Alkaline picrate with deproteinization |
| | mg/dl | 4.34 | 3.47 | 5.21 | 0.44 | 0.87 | |
| | µmol/l | 387 | 310 | 464 | 38.50 | 77.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.37 | 3.50 | 5.24 | 0.44 | 0.87 | |
| | µmol/l | 406 | 325 | 487 | 40.50 | 81.00 | Enzymatic UV method |
| | mg/dl | 4.59 | 3.67 | 5.51 | 0.46 | 0.92 | |
| | µmol/l | 401 | 321 | 481 | 40.00 | 80.00 | Creatinine PAP method |
| | mg/dl | 4.53 | 3.63 | 5.43 | 0.45 | 0.90 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 373 | 298 | 448 | 37.50 | 75.00 | Jaffe rate blanked |
| | mg/dl | 4.21 | 3.37 | 5.05 | 0.42 | 0.84 | |
| | µmol/l | 398 | 319 | 477 | 39.50 | 79.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.50 | 3.60 | 5.40 | 0.45 | 0.90 | |
| | µmol/l | 390 | 312 | 468 | 39.00 | 78.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.41 | 3.53 | 5.29 | 0.44 | 0.88 | |
| | µmol/l | 412 | 330 | 494 | 41.00 | 82.00 | Vitros IDMS Traceable |
| | mg/dl | 4.66 | 3.73 | 5.59 | 0.47 | 0.93 | |
| | µmol/l | 396 | 317 | 475 | 39.50 | 79.00 | IDMS traceable |
| | mg/dl | 4.47 | 3.58 | 5.36 | 0.45 | 0.89 | |
| D-3-Hydroxybutyrate | mmol/l | 1.14 | 0.97 | 1.31 | 0.09 | 0.17 | Tris buffer 100mmol pH 8.5 |
| Digoxin | nmol/l | 3.92 | 3.14 | 4.70 | 0.39 | 0.78 | Immunoturbidimetric |
| | ng/ml | 3.06 | 2.45 | 3.67 | 0.31 | 0.61 | |
| Folate | nmol/l | 7.28 | 5.53 | 9.03 | 0.88 | 1.75 | Roche Cobas e402/e801 |
| | ng/ml | 3.21 | 2.44 | 3.98 | 0.39 | 0.77 | |
| Free T4 | pmol/l | 50.5 | 37.9 | 63.1 | 6.30 | 12.60 | Abbott Architect |
| | ng/dl | 3.94 | 2.96 | 4.92 | 0.49 | 0.98 | |
| | pg/ml | 39.4 | 29.6 | 49.2 | 49.00 | 98.00 | Abbott Architect |
| | pmol/l | 67.3 | 50.5 | 84.1 | 8.40 | 16.80 | Siemens Centaur XP/XPT/Classic |
| | ng/dl | 5.25 | 3.94 | 6.56 | 0.66 | 1.31 | |
| | pg/ml | 52.5 | 39.4 | 65.6 | 6.55 | 13.10 | Siemens Centaur XP/XPT/Classic |
| | pmol/l | 72.8 | 54.6 | 91.0 | 9.10 | 18.20 | Siemens Immulite 2000/2500 |
| | ng/dl | 5.68 | 4.26 | 7.10 | 0.71 | 1.42 | |
| | pg/ml | 56.8 | 42.6 | 71.0 | 7.10 | 14.20 | Siemens Immulite 2000/2500 |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| Analyte | unit | Target | Range low | Range high | 1SD | 2SD | methods |
|---|---|---|---|---|---|---|---|
| Free T4 | pmol/l | 77.2 | 57.9 | 96.5 | 9.65 | 19.30 | Siemens Immulite 1000 |
| | ng/dl | 6.02 | 4.52 | 7.52 | 0.75 | 1.50 | |
| | pg/ml | 60.2 | 45.2 | 75.2 | 7.50 | 15.00 | Siemens Immulite 1000 |
| | pmol/l | 66.9 | 50.2 | 83.6 | 8.35 | 16.70 | Beckman DxI800 |
| | ng/dl | 5.22 | 3.92 | 6.52 | 0.65 | 1.30 | |
| | pg/ml | 52.2 | 39.2 | 65.2 | 6.50 | 13.00 | Beckman DxI800 |
| | pmol/l | 82.2 | 61.7 | 103 | 10.25 | 20.50 | Roche Elecsys |
| | ng/dl | 6.41 | 4.81 | 8.01 | 0.80 | 1.60 | |
| | pg/ml | 64.1 | 48.1 | 80.1 | 8.01 | 16.00 | Roche Elecsys |
| | pmol/l | 62.8 | 47.1 | 78.5 | 7.85 | 15.70 | Beckman Access |
| | ng/dl | 4.90 | 3.67 | 6.13 | 0.62 | 1.23 | |
| | pg/ml | 49.0 | 36.7 | 61.3 | 6.15 | 12.30 | Beckman Access |
| | pmol/l | 81.9 | 61.4 | 102 | 10.25 | 20.50 | Tosoh Series |
| | ng/dl | 6.39 | 4.79 | 7.99 | 0.80 | 1.60 | |
| | pg/ml | 63.9 | 47.9 | 79.9 | 8.00 | 16.00 | Tosoh Series |
| | pmol/l | 89.7 | 67.3 | 112 | 11.20 | 22.40 | Vitros ECi |
| | ng/dl | 7.00 | 5.25 | 8.75 | 0.88 | 1.75 | |
| | pg/ml | 70.0 | 52.5 | 87.5 | 8.75 | 17.50 | Vitros ECi |
| | pmol/l | 80.1 | 60.1 | 100 | 10.00 | 20.00 | Roche Cobas 4000/E411 |
| | ng/dl | 6.25 | 4.69 | 7.81 | 0.78 | 1.56 | |
| | pg/ml | 62.5 | 46.9 | 78.1 | 7.80 | 15.60 | Roche Cobas 4000/E411 |
| | pmol/l | 79.4 | 59.6 | 99.2 | 9.90 | 19.80 | Roche Cobas e601/602 |
| | ng/dl | 6.19 | 4.65 | 7.73 | 0.77 | 1.54 | |
| | pg/ml | 61.9 | 46.5 | 77.3 | 7.70 | 15.40 | Roche Cobas e601/602 |
| | pmol/l | 77.7 | 58.3 | 97.1 | 9.70 | 19.40 | Biomerieux Vidas FT4N Kit |
| | ng/dl | 6.06 | 4.55 | 7.57 | 0.76 | 1.51 | |
| | pg/ml | 60.6 | 45.5 | 75.7 | 7.55 | 15.10 | Biomerieux Vidas FT4N Kit |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Free T4 | pmol/l | 87.9 | 65.9 | 110 | 11.00 | 22.00 | Siemens Dimension ExI LOCI |
| | ng/dl | 6.86 | 5.14 | 8.58 | 0.86 | 1.72 | |
| | pg/ml | 68.6 | 51.4 | 85.8 | 8.60 | 17.20 | Siemens Dimension ExI LOCI |
| | pmol/l | 56.8 | 42.6 | 71.0 | 7.10 | 14.20 | Mindray CL 8000i/6000i/2000i/1200i/1000i |
| | ng/dl | 4.43 | 3.32 | 5.54 | 0.56 | 1.11 | |
| | pg/ml | 44.3 | 33.2 | 55.4 | 5.55 | 11.10 | Mindray CL 8000i/6000i/2000i/1200i/1000i |
| | pmol/l | 81.6 | 61.2 | 102 | 10.20 | 20.40 | Roche Cobas e402/e801 |
| | ng/dl | 6.36 | 4.77 | 7.95 | 0.80 | 1.59 | |
| | pg/ml | 63.6 | 47.7 | 79.5 | 7.95 | 15.90 | Roche Cobas e402/e801 |
| Gentamicin | µmol/l | 19.0 | 15.2 | 22.9 | 1.92 | 3.84 | Gravimetric |
| | µg/ml | 9.10 | 7.27 | 10.9 | 0.92 | 1.83 | |
| gamma-GT | U/l | 169 | 144 | 194 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 133 | 113 | 153 | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 104 | 89 | 119 | 7.50 | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 204 | 173 | 235 | 15.50 | 31.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 169 | 144 | 194 | 12.50 | 25.00 | Gamma glutamyl-4-nitroanilide 37°C |
| | U/l | 133 | 113 | 153 | 10.00 | 20.00 | Gamma glutamyl-4-nitroanilide 30°C |
| | U/l | 104 | 89 | 119 | 7.50 | 15.00 | Gamma glutamyl-4-nitroanilide 25°C |
| | U/l | 177 | 150 | 204 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 139 | 118 | 160 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 109 | 93 | 125 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| GLDH | U/l | 32 | 25 | 39 | 3.50 | 7.00 | Triethanolamine buffer 50 mmol 37°C |
| | U/l | 25 | 19 | 31 | 3.00 | 6.00 | Triethanolamine buffer 50 mmol 30°C |
| | U/l | 20 | 16 | 24 | 2.00 | 4.00 | Triethanolamine buffer 50 mmol 25°C |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Glucose | mmol/l | 14.8 | 12.5 | 17.1 | 1.15 | 2.30 | Ortho Vitros Microslide Systems |
| | mg/dl | 267 | 225 | 309 | 21.00 | 42.00 | |
| | mmol/l | 15.7 | 13.3 | 18.1 | 1.20 | 2.40 | Glucose dehydrogenase |
| | mg/dl | 283 | 240 | 326 | 21.50 | 43.00 | |
| | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |
| | mmol/l | 15.0 | 12.8 | 17.2 | 1.10 | 2.20 | Oxygen electrode |
| | mg/dl | 270 | 231 | 309 | 19.50 | 39.00 | |
| | mmol/l | 15.5 | 13.2 | 17.8 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 279 | 238 | 320 | 20.50 | 41.00 | |
| alpha-HBDH | U/l | 388 | 307 | 469 | 40.50 | 81.00 | Oxobutyrate < 10 mmol/l 37°C |
| | U/l | 293 | 232 | 354 | 30.50 | 61.00 | Oxobutyrate < 10 mmol/l 30°C |
| | U/l | 220 | 174 | 266 | 23.00 | 46.00 | Oxobutyrate < 10 mmol/l 25°C |
| HDL - Cholesterol | mmol/l | 2.58 | 2.19 | 2.97 | 0.20 | 0.39 | Direct HDL PPD |
| | mg/dl | 99.6 | 84.5 | 115 | 7.55 | 15.10 | |
| | mmol/l | 2.44 | 2.07 | 2.81 | 0.19 | 0.37 | Direct HDL Immunoseparation |
| | mg/dl | 94.2 | 79.9 | 109 | 7.15 | 14.30 | |
| | mmol/l | 2.37 | 2.01 | 2.73 | 0.18 | 0.36 | Vitros Magnetic HDL |
| | mg/dl | 91.5 | 77.6 | 105 | 6.95 | 13.90 | |
| | mmol/l | 2.37 | 2.01 | 2.73 | 0.18 | 0.36 | Direct Clearance Method |
| | mg/dl | 91.5 | 77.6 | 105 | 6.95 | 13.90 | |
| | mmol/l | 2.37 | 2.01 | 2.73 | 0.18 | 0.36 | Vitros dHDL PTA/MgCl2 direct precipitation |
| | mg/dl | 91.5 | 77.6 | 105 | 6.95 | 13.90 | |
| | mmol/l | 2.56 | 2.18 | 2.94 | 0.19 | 0.38 | HDL - Ultra |
| | mg/dl | 98.8 | 84.1 | 114 | 7.35 | 14.70 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 2.87 | 2.44 | 3.30 | 0.22 | 0.43 | Direct HDL Roche 4th Generation |
| | mg/dl | 111 | 94.2 | 128 | 8.40 | 16.80 | |
| Immunoglobulin A | g/l | 1.77 | 1.33 | 2.21 | 0.22 | 0.44 | Immunoturbidimetric |
| | mg/dl | 177 | 133 | 221 | 22.00 | 44.00 | |
| Immunoglobulin G | g/l | 5.94 | 4.87 | 7.01 | 0.54 | 1.07 | Immunoturbidimetric |
| | mg/dl | 594 | 487 | 701 | 53.50 | 107.00 | |
| Immunoglobulin M | g/l | 0.63 | 0.51 | 0.76 | 0.06 | 0.13 | Immunoturbidimetric |
| | mg/dl | 63.2 | 50.6 | 75.8 | 6.30 | 12.60 | |
| Iron | µmol/l | 38.2 | 31.4 | 45.0 | 3.40 | 6.80 | Colorimetric with ppt. |
| | µg/dl | 214 | 176 | 252 | 19.00 | 38.00 | |
| | µmol/l | 38.6 | 31.7 | 45.5 | 3.45 | 6.90 | Colorimetric without ppt. |
| | µg/dl | 216 | 177 | 255 | 19.50 | 39.00 | |
| | µmol/l | 36.9 | 30.2 | 43.6 | 3.35 | 6.70 | Ortho Vitros Microslide Systems |
| | µg/dl | 206 | 169 | 243 | 18.50 | 37.00 | |
| Lactate | mmol/l | 5.43 | 4.45 | 6.41 | 0.49 | 0.98 | Colorimetric Lactate Oxidase |
| | mg/dl | 48.9 | 40.1 | 57.7 | 4.40 | 8.80 | |
| | mmol/l | 5.01 | 4.11 | 5.91 | 0.45 | 0.90 | Ortho Vitros Microslide Systems |
| | mg/dl | 45.1 | 37.0 | 53.2 | 4.05 | 8.10 | |
| | mmol/l | 5.25 | 4.31 | 6.19 | 0.47 | 0.94 | Ion selective electrode |
| | mg/dl | 47.3 | 38.8 | 55.8 | 4.25 | 8.50 | |
| | mmol/l | 5.16 | 4.23 | 6.09 | 0.47 | 0.93 | UV LDH |
| | mg/dl | 46.5 | 38.1 | 54.9 | 4.20 | 8.40 | |
| LD (LDH) | U/l | 354 | 301 | 407 | 26.50 | 53.00 | L->P 37°C |
| | U/l | 256 | 217 | 295 | 19.50 | 39.00 | L->P 30°C |
| | U/l | 179 | 153 | 205 | 13.00 | 26.00 | L->P 25°C |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| LD (LDH) | U/l | 745 | 633 | 857 | 56.00 | 112.00 | P->L Scandinavian & Dutch 37°C |
| | U/l | 538 | 457 | 619 | 40.50 | 81.00 | P->L Scandinavian & Dutch 30°C |
| | U/l | 378 | 321 | 435 | 28.50 | 57.00 | P->L Scandinavian & Dutch 25°C |
| | U/l | 710 | 603 | 817 | 53.50 | 107.00 | P->L German methods 37°C |
| | U/l | 513 | 435 | 591 | 39.00 | 78.00 | P->L German methods 30°C |
| | U/l | 360 | 306 | 414 | 27.00 | 54.00 | P->L German methods 25°C |
| | U/l | 712 | 605 | 819 | 53.50 | 107.00 | P->L SFBC 37°C |
| | U/l | 514 | 437 | 591 | 38.50 | 77.00 | P->L SFBC 30°C |
| | U/l | 361 | 307 | 415 | 27.00 | 54.00 | P->L SFBC 25°C |
| | U/l | 356 | 303 | 409 | 26.50 | 53.00 | L->P IFCC 37°C |
| | U/l | 257 | 219 | 295 | 19.00 | 38.00 | L->P IFCC 30°C |
| | U/l | 180 | 154 | 206 | 13.00 | 26.00 | L->P IFCC 25°C |
| | U/l | 382 | 325 | 439 | 28.50 | 57.00 | Ortho Vitros IFCC Traceable 37°C |
| Lipase | U/l | 63 | 51 | 75 | 6.00 | 12.00 | Other Colorimetric 37°C |
| | U/l | 676 | 542 | 810 | 67.00 | 134.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 66 | 53 | 79 | 6.50 | 13.00 | Roche Colorimetric 37°C |
| | U/l | 85 | 68 | 102 | 8.50 | 17.00 | Randox Colorimetric 37°C |
| Lithium | mmol/l | 2.42 | 2.13 | 2.71 | 0.15 | 0.29 | Ortho Vitros Microslide Systems |
| | mg/dl | 1.68 | 1.48 | 1.88 | 0.10 | 0.20 | |
| | mmol/l | 2.01 | 1.77 | 2.25 | 0.12 | 0.24 | Flame photometry |
| | mg/dl | 1.40 | 1.23 | 1.57 | 0.09 | 0.17 | |
| | mmol/l | 2.05 | 1.80 | 2.30 | 0.13 | 0.25 | Ion selective electrode |
| | mg/dl | 1.42 | 1.25 | 1.59 | 0.09 | 0.17 | |
| | mmol/l | 2.02 | 1.78 | 2.26 | 0.12 | 0.24 | Spectrophotometric |
| | mg/dl | 1.40 | 1.24 | 1.56 | 0.08 | 0.16 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 1.91 | 1.68 | 2.14 | 0.12 | 0.23 | Arsenazo III |
| | mg/dl | 4.64 | 4.08 | 5.20 | 0.28 | 0.56 | |
| | mmol/l | 1.94 | 1.70 | 2.18 | 0.12 | 0.24 | Ortho Vitros Microslide Systems |
| | mg/dl | 4.71 | 4.13 | 5.29 | 0.29 | 0.58 | |
| | mmol/l | 1.91 | 1.68 | 2.14 | 0.12 | 0.23 | Atomic absorption |
| | mg/dl | 4.64 | 4.08 | 5.20 | 0.28 | 0.56 | |
| | mmol/l | 1.82 | 1.60 | 2.04 | 0.11 | 0.22 | Calmagite |
| | mg/dl | 4.42 | 3.89 | 4.95 | 0.27 | 0.53 | |
| | mmol/l | 1.89 | 1.67 | 2.11 | 0.11 | 0.22 | Xylidyl Blue |
| | mg/dl | 4.59 | 4.06 | 5.12 | 0.27 | 0.53 | |
| | mmol/l | 1.93 | 1.70 | 2.16 | 0.12 | 0.23 | Methylthymol blue |
| | mg/dl | 4.69 | 4.13 | 5.25 | 0.28 | 0.56 | |
| | mmol/l | 1.92 | 1.69 | 2.15 | 0.12 | 0.23 | Chlorphosphonazo III |
| | mg/dl | 4.67 | 4.11 | 5.23 | 0.28 | 0.56 | |
| | mmol/l | 1.92 | 1.69 | 2.15 | 0.12 | 0.23 | Enzymatic |
| | mg/dl | 4.67 | 4.11 | 5.23 | 0.28 | 0.56 | |
| NEFA | mmol/l | TBD | TBD | TBD | TBD | TBD | Colorimetric |
| Osmolality | mOsm/kg | 347 | 278 | 416 | 34.50 | 69.00 | Calculated |
| | mOsm/kg | 379 | 303 | 455 | 38.00 | 76.00 | Freezing point depression |
| Paracetamol | mmol/l | 0.60 | 0.48 | 0.71 | 0.06 | 0.12 | Gravimetric |
| | mg/l | 90.0 | 72.0 | 108 | 9.00 | 18.00 | |
| Phosphate Inorganic | mmol/l | 2.20 | 1.87 | 2.53 | 0.17 | 0.33 | Ortho Vitros Microslide Systems |
| | mg/dl | 6.82 | 5.80 | 7.84 | 0.51 | 1.02 | |
| | mmol/l | 2.21 | 1.88 | 2.54 | 0.17 | 0.33 | Phosphomolybdate enzymatic |
| | mg/dl | 6.85 | 5.83 | 7.87 | 0.51 | 1.02 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Phosphate Inorganic | mmol/l | 2.22 | 1.89 | 2.55 | 0.17 | 0.33 | Phosphomolybdate UV |
| | mg/dl | 6.88 | 5.86 | 7.90 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.00 | 5.70 | 6.30 | 0.15 | 0.30 | Ortho Vitros Microslide Systems |
| | mmol/l | 6.29 | 5.98 | 6.60 | 0.16 | 0.31 | Enzymatic |
| | mmol/l | 5.65 | 5.37 | 5.93 | 0.14 | 0.28 | Flame photometry |
| | mmol/l | 5.95 | 5.65 | 6.25 | 0.15 | 0.30 | ISE method - direct |
| | mmol/l | 6.11 | 5.81 | 6.41 | 0.15 | 0.30 | ISE method - indirect |
| | mmol/l | 5.68 | 5.40 | 5.96 | 0.14 | 0.28 | Colorimetric |
| Protein Total | g/l | 46.4 | 37.2 | 55.6 | 4.60 | 9.20 | Ortho Vitros Microslide Systems |
| | g/dl | 4.64 | 3.72 | 5.56 | 0.46 | 0.92 | |
| | g/l | 45.7 | 36.6 | 54.8 | 4.55 | 9.10 | Biuret reaction end point |
| | g/dl | 4.57 | 3.66 | 5.48 | 0.46 | 0.91 | |
| | g/l | 44.7 | 35.8 | 53.6 | 4.45 | 8.90 | Biuret reaction kinetic |
| | g/dl | 4.47 | 3.58 | 5.36 | 0.45 | 0.89 | |
| PSA Total | ng/ml = | 13.3 | 9.98 | 16.6 | 1.66 | 3.32 | Tosoh Series |
| | ng/ml = | 17.9 | 13.4 | 22.4 | 2.25 | 4.50 | Roche Elecsys Modular E170 |
| | ng/ml = | 19.2 | 14.4 | 24.0 | 2.40 | 4.80 | Beckman Access standardised to Hybritech |
| | ng/ml = | 17.8 | 13.4 | 22.2 | 2.20 | 4.40 | bioMerieux VIDAS TPSA |
| | ng/ml = | 15.0 | 11.3 | 18.7 | 1.85 | 3.70 | Siemens Immulite 2000 1st Generation |
| | ng/ml = | 14.3 | 10.7 | 17.9 | 1.80 | 3.60 | Abbott Architect |
| | ng/ml = | 16.6 | 12.5 | 20.7 | 2.05 | 4.10 | Ortho Vitros ECi |
| | ng/ml = | 17.5 | 13.1 | 21.9 | 2.20 | 4.40 | Siemens Dimension |
| | ng/ml = | 18.4 | 13.8 | 23.0 | 2.30 | 4.60 | Cobas E411 |
| | ng/ml = | 18.3 | 13.7 | 22.9 | 2.30 | 4.60 | Roche Cobas 6000/8000 |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Salicylate | mmol/l | 0.87 | 0.70 | 1.04 | 0.09 | 0.17 | Gravimetric |
| | mg/dl | 12.0 | 9.59 | 14.4 | 1.21 | 2.41 | |
| Sodium | mmol/l | 155 | 147 | 163 | 4.00 | 8.00 | Ortho Vitros Microslide Systems |
| | mmol/l | 157 | 149 | 165 | 4.00 | 8.00 | Enzymatic |
| | mmol/l | 154 | 147 | 161 | 3.50 | 7.00 | Flame photometry |
| | mmol/l | 156 | 148 | 164 | 4.00 | 8.00 | ISE method - direct |
| | mmol/l | 159 | 151 | 167 | 4.00 | 8.00 | ISE method - indirect |
| | mmol/l | 151 | 144 | 158 | 3.50 | 7.00 | Colorimetric |
| Theophylline | µmol/l | 139 | 111 | 166 | 13.85 | 27.70 | Gravimetric |
| | µg/ml | 25.0 | 20.0 | 30.0 | 2.50 | 5.00 | |
| Thyroid Stimulating Hormone | µU/ml = | 0.99 | 0.79 | 1.18 | 0.10 | 0.20 | Abbott Architect |
| | µU/ml = | 1.33 | 1.07 | 1.59 | 0.13 | 0.26 | bioMerieux VIDAS TSH |
| | µU/ml = | 1.31 | 1.04 | 1.57 | 0.13 | 0.27 | bioMerieux VIDAS TSH3 Ultrasensitive |
| | µU/ml = | 1.18 | 0.94 | 1.42 | 0.12 | 0.24 | Siemens Centaur XP/XPT/Classic |
| | µU/ml = | 1.26 | 1.01 | 1.51 | 0.13 | 0.25 | Siemens Immulite 2000/2500 |
| | µU/ml = | 1.24 | 0.99 | 1.49 | 0.12 | 0.25 | Siemens Immulite 1000 |
| | µU/ml = | 1.46 | 1.17 | 1.75 | 0.15 | 0.29 | Roche Elecsys |
| | µU/ml = | 1.19 | 0.95 | 1.43 | 0.12 | 0.24 | Beckman Access Fast TSH |
| | µU/ml = | 1.22 | 0.97 | 1.47 | 0.12 | 0.25 | Beckman Access hyperTSH 3rd Generation |
| | µU/ml = | 1.23 | 0.99 | 1.48 | 0.12 | 0.25 | Tosoh Series |
| | µU/ml = | 1.16 | 0.93 | 1.40 | 0.12 | 0.24 | Vitros ECi |
| | µU/ml = | 1.47 | 1.18 | 1.76 | 0.15 | 0.29 | Roche Cobas 4000/E411 |
| | µU/ml = | 1.42 | 1.14 | 1.70 | 0.14 | 0.28 | Roche Cobas e601/602 |
| | µU/ml = | 1.22 | 0.98 | 1.46 | 0.12 | 0.24 | Monobind Inc. ELISA / CLIA |
| | µU/ml = | 1.14 | 0.91 | 1.37 | 0.12 | 0.23 | Siemens Dimension ExI LOCI |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Thyroid Stimulating Hormone | µU/ml = | 1.15 | 0.92 | 1.38 | 0.12 | 0.23 | Siemens Centaur CP |
| | µU/ml = | 1.20 | 0.96 | 1.44 | 0.12 | 0.24 | Beckman DxI 600/800 Access (3rd IS) |
| | µU/ml = | 1.59 | 1.28 | 1.91 | 0.16 | 0.31 | Mindray CL 8000i/6000i/2000i/1200i/1000i |
| | µU/ml = | 1.39 | 1.11 | 1.67 | 0.14 | 0.28 | Roche Cobas e402/e801 |
| | µU/ml = | 1.17 | 0.94 | 1.40 | 0.12 | 0.23 | Siemens Atellica IM |
| TIBC | µmol/l | 33.7 | 26.6 | 40.8 | 3.55 | 7.10 | Ortho Vitros Microslide Systems |
| | µg/dl | 188 | 149 | 227 | 19.50 | 39.00 | |
| | µmol/l | 38.7 | 30.6 | 46.8 | 4.05 | 8.10 | Removal of excess free iron |
| | µg/dl | 216 | 171 | 261 | 22.50 | 45.00 | |
| | µmol/l | 42.2 | 33.3 | 51.1 | 4.45 | 8.90 | FE+UIBC(saturation with iron) |
| | µg/dl | 236 | 186 | 286 | 25.00 | 50.00 | |
| | µmol/l | 44.8 | 35.4 | 54.2 | 4.70 | 9.40 | Randox Direct |
| | µg/dl | 250 | 198 | 302 | 26.00 | 52.00 | |
| Tobramycin | µmol/l | 15.6 | 12.5 | 18.7 | 1.55 | 3.10 | Gravimetric |
| | µg/ml | 7.30 | 5.85 | 8.75 | 0.73 | 1.45 | |
| Total T3 | nmol/l | 2.75 | 2.06 | 3.44 | 0.35 | 0.69 | Abbott Architect |
| | ng/ml | 1.79 | 1.34 | 2.24 | 0.23 | 0.45 | |
| | ng/dl | 179 | 134 | 224 | 22.50 | 45.00 | Abbott Architect |
| | nmol/l | 3.34 | 2.50 | 4.18 | 0.42 | 0.84 | BioMerieux Vidas |
| | ng/ml | 2.17 | 1.63 | 2.71 | 0.27 | 0.54 | |
| | ng/dl | 217 | 163 | 271 | 27.00 | 54.00 | BioMerieux Vidas |
| | nmol/l | 3.85 | 2.89 | 4.81 | 0.48 | 0.96 | Siemens Centaur XP/XPT/Classic |
| | ng/ml | 2.51 | 1.88 | 3.14 | 0.32 | 0.63 | |
| | ng/dl | 251 | 188 | 314 | 31.50 | 63.00 | Siemens Centaur XP/XPT/Classic |
| | nmol/l | 3.23 | 2.43 | 4.03 | 0.40 | 0.80 | Siemens Immulite 2000/2500 |
| | ng/ml | 2.10 | 1.58 | 2.62 | 0.26 | 0.52 | |
| | ng/dl | 210 | 158 | 262 | 26.00 | 52.00 | Siemens Immulite 2000/2500 |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Total T3 | nmol/l | 3.30 | 2.48 | 4.12 | 0.41 | 0.82 | Beckman DxI800 |
| | ng/ml | 2.15 | 1.61 | 2.69 | 0.27 | 0.54 | |
| | ng/dl | 215 | 161 | 269 | 27.00 | 54.00 | Beckman DxI800 |
| | nmol/l | 3.99 | 2.99 | 4.99 | 0.50 | 1.00 | Roche Elecsys |
| | ng/ml | 2.60 | 1.95 | 3.25 | 0.33 | 0.65 | |
| | ng/dl | 260 | 195 | 325 | 32.50 | 64.50 | Roche Elecsys |
| | nmol/l | 3.42 | 2.56 | 4.28 | 0.43 | 0.86 | Beckman Access |
| | ng/ml | 2.23 | 1.67 | 2.79 | 0.28 | 0.56 | |
| | ng/dl | 223 | 167 | 279 | 28.00 | 56.00 | Beckman Access |
| | nmol/l | 3.19 | 2.39 | 4.00 | 0.40 | 0.80 | Tosoh Series |
| | ng/ml | 2.08 | 1.56 | 2.60 | 0.26 | 0.52 | |
| | ng/dl | 208 | 156 | 260 | 26.00 | 52.00 | Tosoh Series |
| | nmol/l | 4.53 | 3.39 | 5.67 | 0.57 | 1.14 | Vitros ECi |
| | ng/ml | 2.95 | 2.21 | 3.69 | 0.37 | 0.74 | |
| | ng/dl | 295 | 221 | 369 | 37.00 | 74.00 | Vitros ECi |
| | nmol/l | 3.75 | 2.81 | 4.69 | 0.47 | 0.94 | Roche Cobas 4000/E411 |
| | ng/ml | 2.44 | 1.83 | 3.05 | 0.31 | 0.61 | |
| | ng/dl | 244 | 183 | 305 | 30.50 | 61.00 | Roche Cobas 4000/E411 |
| | nmol/l | 3.70 | 2.78 | 4.62 | 0.46 | 0.92 | Roche Cobas e601/602 |
| | ng/ml | 2.41 | 1.81 | 3.01 | 0.30 | 0.60 | |
| | ng/dl | 241 | 181 | 301 | 30.00 | 60.00 | Roche Cobas e601/602 |
| | nmol/l | 3.53 | 2.65 | 4.41 | 0.44 | 0.88 | Monobind Inc. ELISA / CLIA |
| | ng/ml | 2.30 | 1.73 | 2.87 | 0.29 | 0.57 | |
| | ng/dl | 230 | 173 | 287 | 28.50 | 57.00 | Monobind Inc. ELISA / CLIA |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Total T3 | nmol/l | 3.17 | 2.38 | 3.96 | 0.40 | 0.79 | Mindray CL Series |
| | ng/ml | 2.06 | 1.55 | 2.57 | 0.26 | 0.51 | |
| | ng/dl | 206 | 155 | 257 | 25.50 | 51.00 | Mindray CL Series |
| | nmol/l | 3.95 | 2.96 | 4.94 | 0.50 | 0.99 | Roche Cobas e402/e801 |
| | ng/ml | 2.57 | 1.93 | 3.21 | 0.32 | 0.64 | |
| | ng/dl | 257 | 193 | 321 | 32.00 | 64.00 | Roche Cobas e402/e801 |
| Total T4 | nmol/l | 234 | 176 | 292 | 29.00 | 58.00 | Abbott Architect |
| | µg/dl | 18.3 | 13.7 | 22.9 | 2.30 | 4.60 | |
| | ng/ml | 183 | 137 | 229 | 23.00 | 46.00 | Abbott Architect |
| | nmol/l | 220 | 165 | 275 | 27.50 | 55.00 | BioMerieux Vidas |
| | µg/dl | 17.2 | 12.9 | 21.5 | 2.15 | 4.30 | |
| | ng/ml | 172 | 129 | 215 | 21.50 | 43.00 | BioMerieux Vidas |
| | nmol/l | 242 | 182 | 302 | 30.00 | 60.00 | Siemens Centaur XP/XPT/Classic |
| | µg/dl | 18.9 | 14.2 | 23.6 | 2.35 | 4.70 | |
| | ng/ml | 189 | 142 | 236 | 23.50 | 47.00 | Siemens Centaur XP/XPT/Classic |
| | nmol/l | 195 | 146 | 244 | 24.50 | 49.00 | Siemens Immulite 2000/2500 |
| | µg/dl | 15.2 | 11.4 | 19.0 | 1.90 | 3.80 | |
| | ng/ml | 152 | 114 | 190 | 19.00 | 38.00 | Siemens Immulite 2000/2500 |
| | nmol/l | 212 | 159 | 265 | 26.50 | 53.00 | Roche Elecsys |
| | µg/dl | 16.5 | 12.4 | 20.6 | 2.05 | 4.10 | |
| | ng/ml | 165 | 124 | 206 | 20.50 | 41.00 | Roche Elecsys |
| | nmol/l | 267 | 200 | 334 | 33.50 | 67.00 | Beckman Access |
| | µg/dl | 20.8 | 15.6 | 26.0 | 2.60 | 5.20 | |
| | ng/ml | 208 | 156 | 260 | 26.00 | 52.00 | Beckman Access |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Total T4 | nmol/l | 217 | 162 | 272 | 27.50 | 55.00 | Tosoh Series |
| | µg/dl | 16.9 | 12.6 | 21.2 | 2.15 | 4.30 | |
| | ng/ml | 169 | 126 | 212 | 21.50 | 43.00 | Tosoh Series |
| | nmol/l | 236 | 177 | 295 | 29.50 | 59.00 | Vitros ECi |
| | µg/dl | 18.4 | 13.8 | 23.0 | 2.30 | 4.60 | |
| | ng/ml | 184 | 138 | 230 | 23.00 | 46.00 | Vitros ECi |
| | nmol/l | 212 | 159 | 265 | 26.50 | 53.00 | Roche Cobas 4000/E411 |
| | µg/dl | 16.5 | 12.4 | 20.6 | 2.05 | 4.10 | |
| | ng/ml | 165 | 124 | 206 | 20.50 | 41.00 | Roche Cobas 4000/E411 |
| | nmol/l | 216 | 162 | 270 | 27.00 | 54.00 | Roche Cobas e601/602 |
| | µg/dl | 16.8 | 12.6 | 21.0 | 2.10 | 4.20 | |
| | ng/ml | 168 | 126 | 210 | 21.00 | 42.00 | Roche Cobas e601/602 |
| | nmol/l | 200 | 150 | 250 | 25.00 | 50.00 | Monobind Inc. ELISA / CLIA |
| | µg/dl | 15.6 | 11.7 | 19.5 | 1.95 | 3.90 | |
| | ng/ml | 156 | 117 | 195 | 19.50 | 39.00 | Monobind Inc. ELISA / CLIA |
| | nmol/l | 214 | 161 | 267 | 26.50 | 53.00 | Roche Cobas e402/e801 |
| | µg/dl | 16.7 | 12.6 | 20.8 | 2.05 | 4.10 | |
| | ng/ml | 167 | 126 | 208 | 20.50 | 41.00 | Roche Cobas e402/e801 |
| Triglycerides | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | L/G Kinase EP. no correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | L/G kinase EP. 0.11 mmol/l correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| | mmol/l | 3.33 | 2.80 | 3.86 | 0.27 | 0.53 | Ortho Vitros Microslide Systems |
| | mg/dl | 295 | 248 | 342 | 23.50 | 47.00 | |
| Uric Acid (Urate) | mmol/l | 0.52 | 0.45 | 0.59 | 0.03 | 0.07 | Ortho Vitros Microslide Systems |
| | mg/dl | 8.72 | 7.58 | 9.86 | 0.57 | 1.14 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase catalase 340nm |
| | mg/dl | 9.19 | 8.00 | 10.4 | 0.60 | 1.19 | |
| | mmol/l | 0.57 | 0.50 | 0.65 | 0.04 | 0.07 | Reduction methods |
| | mg/dl | 9.59 | 8.35 | 10.8 | 0.62 | 1.24 | |
| | mmol/l | 0.55 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.31 | 8.10 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.21 | 8.01 | 10.4 | 0.60 | 1.20 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Spectrophotometric at 280-290 |
| | mg/dl | 9.17 | 7.98 | 10.4 | 0.60 | 1.19 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.12 | 7.93 | 10.3 | 0.60 | 1.19 | |
| Urea | mmol/l | 18.8 | 16.0 | 21.6 | 1.40 | 2.80 | Ortho Vitros Microslide Systems |
| | mg/dl | 113 | 96.2 | 130 | 8.40 | 16.80 | |
| | mmol/l | 19.9 | 16.9 | 22.9 | 1.50 | 3.00 | Urease end point |
| | mg/dl | 120 | 102 | 138 | 9.00 | 18.00 | |
| | mmol/l | 20.0 | 17.0 | 23.0 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 120 | 102 | 138 | 9.00 | 18.00 | |



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## METHOD

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Urea | mmol/l | 19.1 | 16.2 | 22.0 | 1.45 | 2.90 | Urease hypochlorite |
| | mg/dl | 115 | 97.4 | 133 | 8.80 | 17.60 | |
| | mmol/l | 20.0 | 17.0 | 23.0 | 1.50 | 3.00 | BUN |
| | mg/dl | 56.1 | 47.7 | 64.5 | 4.20 | 8.40 | |
| Vitamin B12 | pmol/l | 214 | 171 | 257 | 21.50 | 43.00 | Roche Cobas e402/e801 |
| | pg/ml | 290 | 232 | 348 | 29.00 | 58.00 | |
| Zinc | µmol/l | 35.6 | 28.5 | 42.7 | 3.55 | 7.10 | Atomic absorption |
| | µg/dl | 232 | 186 | 278 | 23.00 | 46.00 | |
| | µmol/l | 36.7 | 29.4 | 44.0 | 3.65 | 7.30 | Colorimetric with deproteinisation |
| | µg/dl | 240 | 192 | 288 | 24.00 | 48.00 | |



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## Abbott Alinity/ Architect c/ci Systems®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 28.6 | 24.3 | 32.9 | 2.15 | 4.30 | Bromocresol Green |
| | g/dl | 2.86 | 2.43 | 3.29 | 0.22 | 0.43 | |
| | g/l | 28.2 | 24.0 | 32.4 | 2.10 | 4.20 | Bromocresol Purple |
| | g/dl | 2.82 | 2.40 | 3.24 | 0.21 | 0.42 | |
| Alkaline Phosphatase | U/l | 334 | 284 | 384 | 25.00 | 50.00 | AMP optimised to IFCC 37°C |
| | U/l | 332 | 282 | 382 | 25.00 | 50.00 | AMP non-optimised 37°C |
| | U/l | 322 | 273 | 371 | 24.50 | 49.00 | Colorimetric 37°C |
| ALT (GPT) | U/l | 136 | 109 | 163 | 13.50 | 27.00 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 237 | 202 | 272 | 17.50 | 35.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 304 | 258 | 350 | 23.00 | 46.00 | Abbott Architect / Alinity cal factor 3806 37°C |
| | U/l | 292 | 248 | 336 | 22.00 | 44.00 | Abbott Architect / Alinity cal factor 3431 37°C |
| | U/l | 291 | 248 | 334 | 21.50 | 43.00 | Abbott Architect 37°C |
| AST (GOT) | U/l | 143 | 114 | 172 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| Bile Acids | µmol/l | 45.5 | 36.4 | 54.6 | 4.55 | 9.10 | Enzymatic Colorimetric |
| Bicarbonate | mmol/l | 15.1 | 12.0 | 18.2 | 1.55 | 3.10 | Enzymatic |
| Bilirubin Direct | µmol/l | 30.2 | 23.9 | 36.5 | 3.15 | 6.30 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.77 | 1.40 | 2.14 | 0.19 | 0.37 | |
| | 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 | 29.9 | 23.6 | 36.2 | 3.15 | 6.30 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.75 | 1.38 | 2.12 | 0.19 | 0.37 | |



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## Abbott Alinity/ Architect c/ci Systems®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 87.9 | 69.4 | 106 | 9.25 | 18.50 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 5.14 | 4.06 | 6.22 | 0.54 | 1.08 | |
| | µmol/l | 90.3 | 71.4 | 109 | 9.45 | 18.90 | Diazo with Sulphanilic Acid |
| | mg/dl | 5.28 | 4.18 | 6.38 | 0.55 | 1.10 | |
| | µmol/l | 89.7 | 70.8 | 109 | 9.45 | 18.90 | Diazonium ion |
| | mg/dl | 5.25 | 4.14 | 6.36 | 0.56 | 1.11 | |
| Calcium | mmol/l | 3.05 | 2.74 | 3.36 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.2 | 11.0 | 13.4 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.44 | 6.47 | 8.41 | 0.49 | 0.97 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 287 | 250 | 324 | 18.50 | 37.00 | |
| | mmol/l | 7.52 | 6.54 | 8.50 | 0.49 | 0.98 | Cholesterol Oxidase - IDMS |
| | mg/dl | 290 | 252 | 328 | 19.00 | 38.00 | |
| | mmol/l | 7.48 | 6.51 | 8.45 | 0.49 | 0.97 | Cholesterol Dehydrogenase |
| | mg/dl | 289 | 251 | 327 | 19.00 | 38.00 | |
| Chloride | mmol/l | 113 | 107 | 119 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 5951 | 4761 | 7141 | 595.00 | 1190.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 504 | 414 | 594 | 45.00 | 90.00 | CK-NAC serum start (DGKC) 37°C |
| | U/l | 510 | 418 | 602 | 46.00 | 92.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 508 | 416 | 600 | 46.00 | 92.00 | CK-NAC (IFCC) 37°C |
| | U/l | 502 | 412 | 592 | 45.00 | 90.00 | Abbott CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 413 | 330 | 496 | 41.50 | 83.00 | Alkaline picrate with deproteinization |
| | mg/dl | 4.67 | 3.73 | 5.61 | 0.47 | 0.94 | |
| | µmol/l | 416 | 333 | 499 | 41.50 | 83.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.70 | 3.76 | 5.64 | 0.47 | 0.94 | |
| | µmol/l | 413 | 331 | 495 | 41.00 | 82.00 | Enzymatic UV method |
| | mg/dl | 4.67 | 3.74 | 5.60 | 0.47 | 0.93 | |



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## Abbott Alinity/ Architect c/ci Systems®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 423 | 338 | 508 | 42.50 | 85.00 | Jaffe rate blanked |
| | mg/dl | 4.78 | 3.82 | 5.74 | 0.48 | 0.96 | |
| | µmol/l | 414 | 331 | 497 | 41.50 | 83.00 | IDMS traceable |
| | mg/dl | 4.68 | 3.74 | 5.62 | 0.47 | 0.94 | |
| Free T4 | pmol/l | 52.1 | 39.1 | 65.1 | 6.50 | 13.00 | Abbott Architect |
| | ng/dl | 4.06 | 3.05 | 5.07 | 0.51 | 1.01 | |
| | pg/ml | 40.6 | 30.5 | 50.7 | 5.05 | 10.10 | Abbott Architect |
| gamma-GT | U/l | 173 | 147 | 199 | 13.00 | 26.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 175 | 149 | 201 | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 170 | 145 | 195 | 12.50 | 25.00 | DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C |
| Glucose | mmol/l | 15.6 | 13.3 | 17.9 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 281 | 240 | 322 | 20.50 | 41.00 | |
| | mmol/l | 15.4 | 13.1 | 17.7 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 278 | 236 | 320 | 21.00 | 42.00 | |
| HDL - Cholesterol | mmol/l | 2.61 | 2.22 | 3.00 | 0.20 | 0.39 | Direct HDL PPD |
| | mg/dl | 101 | 85.7 | 116 | 7.65 | 15.30 | |
| | mmol/l | 2.46 | 2.09 | 2.83 | 0.19 | 0.37 | Direct HDL Immunoseparation |
| | mg/dl | 95.0 | 80.7 | 109 | 7.15 | 14.30 | |
| | mmol/l | 2.56 | 2.17 | 2.95 | 0.20 | 0.39 | Direct Clearance Method |
| | mg/dl | 98.8 | 83.8 | 114 | 7.50 | 15.00 | |
| | mmol/l | 2.55 | 2.17 | 2.93 | 0.19 | 0.38 | HDL - Ultra |
| | mg/dl | 98.4 | 83.8 | 113 | 7.30 | 14.60 | |
| Iron | µmol/l | 41.3 | 33.9 | 48.7 | 3.70 | 7.40 | Colorimetric with ppt. |
| | µg/dl | 231 | 190 | 272 | 20.50 | 41.00 | |



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## Abbott Alinity/ Architect c/ci Systems®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Iron | µmol/l | 40.8 | 33.5 | 48.1 | 3.65 | 7.30 | Colorimetric without ppt. |
| | µg/dl | 228 | 187 | 269 | 20.50 | 41.00 | |
| Lactate | mmol/l | 5.60 | 4.59 | 6.61 | 0.51 | 1.01 | Colorimetric Lactate Oxidase |
| | mg/dl | 50.5 | 41.4 | 59.6 | 4.55 | 9.10 | |
| LD (LDH) | U/l | 341 | 290 | 392 | 25.50 | 51.00 | L->P 37°C |
| | U/l | 338 | 288 | 388 | 25.00 | 50.00 | L->P IFCC 37°C |
| Lipase | U/l | 57 | 46 | 68 | 5.50 | 11.00 | Other Colorimetric 37°C |
| Lithium | mmol/l | 2.05 | 1.80 | 2.30 | 0.13 | 0.25 | Spectrophotometric |
| | mg/dl | 1.42 | 1.25 | 1.59 | 0.09 | 0.17 | |
| Magnesium | mmol/l | 1.90 | 1.68 | 2.12 | 0.11 | 0.22 | Arsenazo III |
| | mg/dl | 4.62 | 4.08 | 5.16 | 0.27 | 0.54 | |
| | mmol/l | 1.92 | 1.69 | 2.15 | 0.12 | 0.23 | Enzymatic |
| | mg/dl | 4.67 | 4.11 | 5.23 | 0.28 | 0.56 | |
| Osmolality | mOsm/kg | 350 | 280 | 420 | 35.00 | 70.00 | Calculated |
| Phosphate Inorganic | mmol/l | 2.18 | 1.85 | 2.51 | 0.17 | 0.33 | Phosphomolybdate enzymatic |
| | mg/dl | 6.76 | 5.74 | 7.78 | 0.51 | 1.02 | |
| | mmol/l | 2.19 | 1.86 | 2.52 | 0.17 | 0.33 | Phosphomolybdate UV |
| | mg/dl | 6.79 | 5.77 | 7.81 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.08 | 5.78 | 6.38 | 0.15 | 0.30 | ISE method - indirect |
| Protein Total | g/l | 46.4 | 37.1 | 55.7 | 4.65 | 9.30 | Biuret reaction end point |
| | g/dl | 4.64 | 3.71 | 5.57 | 0.47 | 0.93 | |
| | g/l | 46.4 | 37.1 | 55.7 | 4.65 | 9.30 | Biuret reaction kinetic |
| | g/dl | 4.64 | 3.71 | 5.57 | 0.47 | 0.93 | |
| PSA Total | ng/ml = | 14.1 | 10.6 | 17.6 | 1.75 | 3.50 | Abbott Architect |
| Sodium | mmol/l | 158 | 150 | 166 | 4.00 | 8.00 | ISE method - indirect |



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## Abbott Alinity/ Architect c/ci Systems®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Thyroid Stimulating Hormone | µU/ml = | 0.96 | 0.77 | 1.15 | 0.10 | 0.19 | Abbott Architect |
| TIBC | µmol/l | 45.2 | 35.7 | 54.7 | 4.75 | 9.50 | FE+UIBC(saturation with iron) |
| | µg/dl | 253 | 200 | 306 | 26.50 | 53.00 | |
| Triglycerides | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |
| | mmol/l | 2.86 | 2.40 | 3.32 | 0.23 | 0.46 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 253 | 212 | 294 | 20.50 | 41.00 | |
| | mmol/l | 2.89 | 2.43 | 3.35 | 0.23 | 0.46 | L/G Kinase EP. no correction |
| | mg/dl | 256 | 215 | 297 | 20.50 | 41.00 | |
| | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.24 | 8.03 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.24 | 8.05 | 10.4 | 0.60 | 1.19 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.11 | 7.93 | 10.3 | 0.59 | 1.18 | |
| Urea | mmol/l | 20.9 | 17.8 | 24.0 | 1.55 | 3.10 | Urease end point |
| | mg/dl | 126 | 107 | 145 | 9.50 | 19.00 | |
| | mmol/l | 20.5 | 17.4 | 23.6 | 1.55 | 3.10 | Urease kinetic |
| | mg/dl | 123 | 105 | 141 | 9.00 | 18.00 | |
| | mmol/l | 20.5 | 17.4 | 23.6 | 1.55 | 3.10 | BUN |
| | mg/dl | 57.5 | 48.9 | 66.1 | 4.30 | 8.60 | |



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## ABX Pentra 400®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 29.0 | 24.7 | 33.3 | 2.15 | 4.30 | Bromocresol Green |
| | g/dl | 2.90 | 2.47 | 3.33 | 0.22 | 0.43 | |
| Alkaline Phosphatase | U/l | 342 | 290 | 394 | 26.00 | 52.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 144 | 115 | 173 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| AST (GOT) | U/l | 171 | 136 | 206 | 17.50 | 35.00 | Tris buffer without P5P 37°C |
| Bilirubin Direct | µmol/l | 27.2 | 21.5 | 32.9 | 2.85 | 5.70 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.59 | 1.26 | 1.92 | 0.17 | 0.33 | |
| Bilirubin Total | µmol/l | 90.0 | 71.1 | 109 | 9.45 | 18.90 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 5.27 | 4.16 | 6.38 | 0.56 | 1.11 | |
| Calcium | mmol/l | 3.18 | 2.87 | 3.49 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.7 | 11.5 | 13.9 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.68 | 6.69 | 8.67 | 0.50 | 0.99 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 296 | 258 | 334 | 19.00 | 38.00 | |
| Chloride | mmol/l | 110 | 105 | 115 | 2.50 | 5.00 | ISE direct |
| CK Total | U/l | 488 | 400 | 576 | 44.00 | 88.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 381 | 305 | 457 | 38.00 | 76.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.31 | 3.45 | 5.17 | 0.43 | 0.86 | |
| gamma-GT | U/l | 170 | 144 | 196 | 13.00 | 26.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| Glucose | mmol/l | 15.5 | 13.2 | 17.8 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 279 | 238 | 320 | 20.50 | 41.00 | |
| | mmol/l | 16.0 | 13.6 | 18.4 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 288 | 245 | 331 | 21.50 | 43.00 | |



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## ABX Pentra 400®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 2.69 | 2.29 | 3.09 | 0.20 | 0.40 | Direct HDL PPD |
| | mg/dl | 104 | 88.4 | 120 | 7.80 | 15.60 | |
| Iron | µmol/l | 37.6 | 30.8 | 44.4 | 3.40 | 6.80 | Colorimetric without ppt. |
| | µg/dl | 210 | 172 | 248 | 19.00 | 38.00 | |
| LD (LDH) | U/l | 371 | 316 | 426 | 27.50 | 55.00 | L->P IFCC 37°C |
| Magnesium | mmol/l | 1.80 | 1.58 | 2.02 | 0.11 | 0.22 | Xylidyl Blue |
| | mg/dl | 4.37 | 3.84 | 4.90 | 0.27 | 0.53 | |
| Phosphate Inorganic | mmol/l | 2.52 | 2.14 | 2.90 | 0.19 | 0.38 | Phosphomolybdate UV |
| | mg/dl | 7.81 | 6.63 | 8.99 | 0.59 | 1.18 | |
| Potassium | mmol/l | 5.92 | 5.62 | 6.22 | 0.15 | 0.30 | ISE method - direct |
| Protein Total | g/l | 47.6 | 38.1 | 57.1 | 4.75 | 9.50 | Biuret reaction end point |
| | g/dl | 4.76 | 3.81 | 5.71 | 0.48 | 0.95 | |
| Sodium | mmol/l | 155 | 148 | 162 | 3.50 | 7.00 | ISE method - direct |
| Triglycerides | mmol/l | 2.97 | 2.50 | 3.44 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 263 | 221 | 305 | 21.00 | 42.00 | |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.06 | 7.88 | 10.2 | 0.59 | 1.18 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.06 | 7.88 | 10.2 | 0.59 | 1.18 | |
| | mmol/l | 0.52 | 0.46 | 0.59 | 0.03 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 8.80 | 7.66 | 9.94 | 0.57 | 1.14 | |
| Urea | mmol/l | 18.8 | 16.0 | 21.6 | 1.40 | 2.80 | Urease kinetic |
| | mg/dl | 113 | 96.2 | 130 | 8.40 | 16.80 | |
| | mmol/l | 18.8 | 16.0 | 21.6 | 1.40 | 2.80 | BUN |
| | mg/dl | 52.8 | 44.9 | 60.7 | 3.95 | 7.90 | |



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## Beckman Coulter AU Series®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 28.2 | 23.9 | 32.5 | 2.15 | 4.30 | Bromocresol Green |
| | g/dl | 2.82 | 2.39 | 3.25 | 0.22 | 0.43 | |
| | g/l | 27.8 | 23.7 | 31.9 | 2.05 | 4.10 | Bromocresol Purple |
| | g/dl | 2.78 | 2.37 | 3.19 | 0.21 | 0.41 | |
| Alkaline Phosphatase | U/l | 378 | 321 | 435 | 28.50 | 57.00 | AMP optimised to IFCC 37°C |
| | U/l | 363 | 308 | 418 | 27.50 | 55.00 | AMP non-optimised 37°C |
| ALT (GPT) | U/l | 144 | 115 | 173 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 141 | 113 | 169 | 14.00 | 28.00 | Beckman (Extinction Coefficient) 37°C |
| Amylase Pancreatic | U/l | 224 | 191 | 257 | 16.50 | 33.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 274 | 233 | 315 | 20.50 | 41.00 | pNP Maltotrioside substrates 37°C |
| | U/l | 275 | 234 | 316 | 20.50 | 41.00 | Beckman Coulter - blocked pNPG7 37°C |
| | U/l | 280 | 238 | 322 | 21.00 | 42.00 | Beckman Synchron AMY7 37°C |
| | U/l | 277 | 235 | 319 | 21.00 | 42.00 | Beckman CNPG3 (Extinction Coeff) 37°C |
| AST (GOT) | U/l | 157 | 126 | 188 | 15.50 | 31.00 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 16.5 | 13.1 | 19.9 | 1.70 | 3.40 | Enzymatic |
| Bilirubin Direct | µmol/l | 21.8 | 17.2 | 26.4 | 2.30 | 4.60 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.28 | 1.01 | 1.55 | 0.14 | 0.27 | |
| | µmol/l | 21.7 | 17.1 | 26.3 | 2.30 | 4.60 | Diazo/ Sulphanilic Beckman DxC |
| | mg/dl | 1.27 | 1.00 | 1.54 | 0.14 | 0.27 | |
| Bilirubin Total | µmol/l | 85.3 | 67.4 | 103 | 8.95 | 17.90 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.99 | 3.94 | 6.04 | 0.53 | 1.05 | |



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## Beckman Coulter AU Series®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 85.6 | 67.6 | 104 | 9.00 | 18.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 5.01 | 3.95 | 6.07 | 0.53 | 1.06 | |
| | µmol/l | 84.1 | 66.5 | 102 | 8.80 | 17.60 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.92 | 3.89 | 5.95 | 0.52 | 1.03 | |
| | µmol/l | 84.3 | 66.6 | 102 | 8.85 | 17.70 | DPD (Beckman AU) |
| | mg/dl | 4.93 | 3.90 | 5.96 | 0.52 | 1.03 | |
| Calcium | mmol/l | 3.14 | 2.82 | 3.46 | 0.16 | 0.32 | Cresolphthalein complexone |
| | mg/dl | 12.6 | 11.3 | 13.9 | 0.65 | 1.30 | |
| | mmol/l | 3.12 | 2.81 | 3.43 | 0.16 | 0.31 | Ion selective electrode |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| | mmol/l | 3.12 | 2.81 | 3.43 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.60 | 6.61 | 8.59 | 0.50 | 0.99 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 293 | 255 | 331 | 19.00 | 38.00 | |
| | mmol/l | 7.72 | 6.71 | 8.73 | 0.51 | 1.01 | Cholesterol Oxidase - IDMS |
| | mg/dl | 298 | 259 | 337 | 19.50 | 39.00 | |
| | mmol/l | 7.75 | 6.75 | 8.75 | 0.50 | 1.00 | Cholesterol Dehydrogenase |
| | mg/dl | 299 | 261 | 337 | 19.00 | 38.00 | |
| Chloride | mmol/l | 111 | 106 | 116 | 2.50 | 5.00 | ISE indirect |
| Cholinesterase | U/l | 4857 | 3886 | 5828 | 485.50 | 971.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 525 | 430 | 620 | 47.50 | 95.00 | CK-NAC (IFCC) 37°C |
| | U/l | 541 | 444 | 638 | 48.50 | 97.00 | Monothioglycerol 37°C |
| Creatinine | µmol/l | 375 | 300 | 450 | 37.50 | 75.00 | Alkaline picrate with deproteinization |
| | mg/dl | 4.24 | 3.39 | 5.09 | 0.43 | 0.85 | |
| | µmol/l | 380 | 304 | 456 | 38.00 | 76.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.29 | 3.44 | 5.14 | 0.43 | 0.85 | |



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## Beckman Coulter AU Series®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 399 | 319 | 479 | 40.00 | 80.00 | Enzymatic UV method |
| | mg/dl | 4.51 | 3.60 | 5.42 | 0.46 | 0.91 | |
| | µmol/l | 378 | 303 | 453 | 37.50 | 75.00 | Jaffe rate blanked |
| | mg/dl | 4.27 | 3.42 | 5.12 | 0.43 | 0.85 | |
| | µmol/l | 391 | 313 | 469 | 39.00 | 78.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.42 | 3.54 | 5.30 | 0.44 | 0.88 | |
| | µmol/l | 388 | 310 | 466 | 39.00 | 78.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.38 | 3.50 | 5.26 | 0.44 | 0.88 | |
| | µmol/l | 391 | 312 | 470 | 39.50 | 79.00 | IDMS traceable |
| | mg/dl | 4.42 | 3.53 | 5.31 | 0.45 | 0.89 | |
| D-3-Hydroxybutyrate | mmol/l | 1.18 | 1.00 | 1.36 | 0.09 | 0.18 | Tris buffer 100mmol pH 8.5 |
| gamma-GT | U/l | 173 | 147 | 199 | 13.00 | 26.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 181 | 154 | 208 | 13.50 | 27.00 | Gamma glutamyl-4-nitroanilide 37°C |
| | U/l | 178 | 152 | 204 | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 178 | 151 | 205 | 13.50 | 27.00 | DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C |
| GLDH | U/l | 32 | 26 | 38 | 3.00 | 6.00 | Triethanolamine buffer 50 mmol 37°C |
| Glucose | mmol/l | 15.9 | 13.5 | 18.3 | 1.20 | 2.40 | GOD/02-Beckman method |
| | mg/dl | 287 | 243 | 331 | 22.00 | 44.00 | |
| | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Glucose dehydrogenase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |
| | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |
| | mmol/l | 15.8 | 13.4 | 18.2 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 285 | 241 | 329 | 22.00 | 44.00 | |



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## Beckman Coulter AU Series®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 2.50 | 2.13 | 2.87 | 0.19 | 0.37 | Direct HDL PPD |
| | mg/dl | 96.5 | 82.2 | 111 | 7.15 | 14.30 | |
| | mmol/l | 2.47 | 2.10 | 2.84 | 0.19 | 0.37 | Direct HDL Immunoseparation |
| | mg/dl | 95.3 | 81.1 | 110 | 7.10 | 14.20 | |
| | mmol/l | 2.47 | 2.10 | 2.84 | 0.19 | 0.37 | HDL - Ultra |
| | mg/dl | 95.3 | 81.1 | 110 | 7.10 | 14.20 | |
| Iron | µmol/l | 38.9 | 31.9 | 45.9 | 3.50 | 7.00 | Colorimetric with ppt. |
| | µg/dl | 217 | 178 | 256 | 19.50 | 39.00 | |
| | µmol/l | 39.1 | 32.1 | 46.1 | 3.50 | 7.00 | Colorimetric without ppt. |
| | µg/dl | 219 | 179 | 259 | 20.00 | 40.00 | |
| Lactate | mmol/l | 5.29 | 4.34 | 6.24 | 0.48 | 0.95 | Colorimetric Lactate Oxidase |
| | mg/dl | 47.7 | 39.1 | 56.3 | 4.30 | 8.60 | |
| LD (LDH) | U/l | 355 | 302 | 408 | 26.50 | 53.00 | L->P 37°C |
| | U/l | 769 | 654 | 884 | 57.50 | 115.00 | P->L Scandinavian & Dutch 37°C |
| | U/l | 734 | 624 | 844 | 55.00 | 110.00 | P->L German methods 37°C |
| | U/l | 354 | 301 | 407 | 26.50 | 53.00 | L->P IFCC 37°C |
| | U/l | 357 | 303 | 411 | 27.00 | 54.00 | L to P Beckman (Extinction Coeff) 37°C |
| Lipase | U/l | 60 | 48 | 72 | 6.00 | 12.00 | Other Colorimetric 37°C |
| Lithium | mmol/l | 2.08 | 1.83 | 2.33 | 0.13 | 0.25 | Spectrophotometric |
| | mg/dl | 1.44 | 1.27 | 1.61 | 0.09 | 0.17 | |
| Magnesium | mmol/l | 1.92 | 1.69 | 2.15 | 0.12 | 0.23 | Calmagite |
| | mg/dl | 4.67 | 4.11 | 5.23 | 0.28 | 0.56 | |
| | mmol/l | 1.92 | 1.69 | 2.15 | 0.12 | 0.23 | Xylidyl Blue |
| | mg/dl | 4.67 | 4.11 | 5.23 | 0.28 | 0.56 | |
| | mmol/l | 1.98 | 1.75 | 2.21 | 0.12 | 0.23 | Methylthymol blue |
| | mg/dl | 4.81 | 4.25 | 5.37 | 0.28 | 0.56 | |



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## Beckman Coulter AU Series®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Osmolality | mOsm/kg | 354 | 283 | 425 | 35.50 | 71.00 | Calculated |
| Phosphate Inorganic | mmol/l | 2.22 | 1.88 | 2.56 | 0.17 | 0.34 | Phosphomolybdate enzymatic |
| | mg/dl | 6.88 | 5.83 | 7.93 | 0.53 | 1.05 | |
| | mmol/l | 2.22 | 1.89 | 2.55 | 0.17 | 0.33 | Phosphomolybdate UV |
| | mg/dl | 6.88 | 5.86 | 7.90 | 0.51 | 1.02 | |
| | mmol/l | 2.23 | 1.90 | 2.56 | 0.17 | 0.33 | Beckman PHOSm (365nm) |
| | mg/dl | 6.91 | 5.89 | 7.93 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.06 | 5.76 | 6.36 | 0.15 | 0.30 | ISE method - indirect |
| Protein Total | g/l | 44.7 | 35.7 | 53.7 | 4.50 | 9.00 | Biuret reaction end point |
| | g/dl | 4.47 | 3.57 | 5.37 | 0.45 | 0.90 | |
| | g/l | 44.3 | 35.4 | 53.2 | 4.45 | 8.90 | Biuret reaction kinetic |
| | g/dl | 4.43 | 3.54 | 5.32 | 0.45 | 0.89 | |
| Sodium | mmol/l | 159 | 151 | 167 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 42.2 | 33.3 | 51.1 | 4.45 | 8.90 | FE+UIBC(saturation with iron) |
| | µg/dl | 236 | 186 | 286 | 25.00 | 50.00 | |
| | µmol/l | 41.7 | 33.0 | 50.4 | 4.35 | 8.70 | Direct Colorimetric |
| | µg/dl | 233 | 184 | 282 | 24.50 | 49.00 | |
| | µmol/l | 36.2 | 28.6 | 43.8 | 3.80 | 7.60 | Calculated from Transferrin |
| | µg/dl | 202 | 160 | 244 | 21.00 | 42.00 | |
| Triglycerides | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |
| | mmol/l | 2.85 | 2.40 | 3.30 | 0.23 | 0.45 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 252 | 212 | 292 | 20.00 | 40.00 | |
| | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | L/G Kinase EP. no correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |



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**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 2.83 | 2.38 | 3.28 | 0.23 | 0.45 | L/G kinase EP. 0.11 mmol/l correction |
| | mg/dl | 250 | 211 | 289 | 19.50 | 39.00 | |
| | mmol/l | 2.90 | 2.43 | 3.37 | 0.24 | 0.47 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 257 | 215 | 299 | 21.00 | 42.00 | |
| Uric Acid (Urate) | mmol/l | 0.56 | 0.49 | 0.64 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.46 | 8.23 | 10.7 | 0.62 | 1.23 | |
| | mmol/l | 0.56 | 0.49 | 0.63 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.41 | 8.18 | 10.6 | 0.62 | 1.23 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.24 | 8.03 | 10.5 | 0.61 | 1.21 | |
| Urea | mmol/l | 20.1 | 17.1 | 23.1 | 1.50 | 3.00 | Beckman-Conductivity |
| | mg/dl | 121 | 103 | 139 | 9.00 | 18.00 | |
| | mmol/l | 20.3 | 17.2 | 23.4 | 1.55 | 3.10 | Urease end point |
| | mg/dl | 122 | 103 | 141 | 9.50 | 19.00 | |
| | mmol/l | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 121 | 103 | 139 | 9.00 | 18.00 | |
| | mmol/l | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | BUN |
| | mg/dl | 56.7 | 48.2 | 65.2 | 4.25 | 8.50 | |
| Zinc | µmol/l | 35.1 | 28.1 | 42.1 | 3.50 | 7.00 | Colorimetric with deproteinisation |
| | µg/dl | 229 | 183 | 275 | 23.00 | 46.00 | |



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## Beckman DxC600/800®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 28.5 | 24.2 | 32.8 | 2.15 | 4.30 | Bromocresol Purple |
| | g/dl | 2.85 | 2.42 | 3.28 | 0.22 | 0.43 | |
| Alkaline Phosphatase | U/l | 350 | 298 | 402 | 26.00 | 52.00 | AMP optimised to IFCC 37°C |
| | U/l | 327 | 278 | 376 | 24.50 | 49.00 | AMP non-optimised 37°C |
| ALT (GPT) | U/l | 138 | 111 | 165 | 13.50 | 27.00 | Beckman Mod. IFCC Ref. without P5P 37°C |
| Amylase Total | U/l | 279 | 238 | 320 | 20.50 | 41.00 | Beckman Synchron AMY7 37°C |
| AST (GOT) | U/l | 147 | 118 | 176 | 14.50 | 29.00 | Beckman Mod. IFCC Ref. without P5P 37°C |
| Bilirubin Total | µmol/l | 82.4 | 65.1 | 99.7 | 8.65 | 17.30 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.82 | 3.81 | 5.83 | 0.51 | 1.01 | |
| Calcium | mmol/l | 3.05 | 2.74 | 3.36 | 0.16 | 0.31 | Ion selective electrode |
| | mg/dl | 12.2 | 11.0 | 13.4 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.63 | 6.64 | 8.62 | 0.50 | 0.99 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 295 | 256 | 334 | 19.50 | 39.00 | |
| Chloride | mmol/l | 111 | 105 | 117 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 5071 | 4057 | 6085 | 507.00 | 1014.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 518 | 425 | 611 | 46.50 | 93.00 | CK-NAC (IFCC) 37°C |
| | U/l | 526 | 432 | 620 | 47.00 | 94.00 | Monothioglycerol 37°C |
| Creatinine | µmol/l | 394 | 315 | 473 | 39.50 | 79.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.45 | 3.56 | 5.34 | 0.45 | 0.89 | |
| | µmol/l | 408 | 327 | 489 | 40.50 | 81.00 | Jaffe rate blanked |
| | mg/dl | 4.61 | 3.70 | 5.52 | 0.46 | 0.91 | |



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## Beckman DxC600/800®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 409 | 327 | 491 | 41.00 | 82.00 | IDMS traceable |
| | mg/dl | 4.62 | 3.70 | 5.54 | 0.46 | 0.92 | |
| Glucose | mmol/l | 15.3 | 13.0 | 17.6 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 276 | 234 | 318 | 21.00 | 42.00 | |
| HDL - Cholesterol | mmol/l | 2.60 | 2.21 | 2.99 | 0.20 | 0.39 | Direct HDL PPD |
| | mg/dl | 100 | 85.3 | 115 | 7.35 | 14.70 | |
| | mmol/l | 2.61 | 2.22 | 3.00 | 0.20 | 0.39 | HDL - Ultra |
| | mg/dl | 101 | 85.7 | 116 | 7.65 | 15.30 | |
| Iron | µmol/l | 38.2 | 31.3 | 45.1 | 3.45 | 6.90 | Colorimetric without ppt. |
| | µg/dl | 214 | 175 | 253 | 19.50 | 39.00 | |
| Lactate | mmol/l | 5.19 | 4.25 | 6.13 | 0.47 | 0.94 | Colorimetric Lactate Oxidase |
| | mg/dl | 46.8 | 38.3 | 55.3 | 4.25 | 8.50 | |
| LD (LDH) | U/l | 331 | 281 | 381 | 25.00 | 50.00 | Pyruvate 1.4 mM - Beckman LD-P 37°C |
| Lipase | U/l | 66 | 53 | 79 | 6.50 | 13.00 | Other Colorimetric 37°C |
| Magnesium | mmol/l | 1.94 | 1.71 | 2.17 | 0.12 | 0.23 | Calmagite |
| | mg/dl | 4.71 | 4.16 | 5.26 | 0.28 | 0.55 | |
| Phosphate Inorganic | mmol/l | 2.23 | 1.90 | 2.56 | 0.17 | 0.33 | Phosphomolybdate UV |
| | mg/dl | 6.91 | 5.89 | 7.93 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.05 | 5.74 | 6.36 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 44.5 | 35.6 | 53.4 | 4.45 | 8.90 | Biuret reaction end point |
| | g/dl | 4.45 | 3.56 | 5.34 | 0.45 | 0.89 | |
| | g/l | 43.8 | 35.0 | 52.6 | 4.40 | 8.80 | Biuret reaction kinetic |
| | g/dl | 4.38 | 3.50 | 5.26 | 0.44 | 0.88 | |
| Sodium | mmol/l | 157 | 149 | 165 | 4.00 | 8.00 | ISE method - indirect |
| Triglycerides | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |



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## Beckman DxC600/800®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | L/G Kinase EP. no correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.14 | 7.95 | 10.3 | 0.60 | 1.19 | |
| Urea | mmol/l | 20.0 | 17.0 | 23.0 | 1.50 | 3.00 | Beckman-Conductivity |
| | mg/dl | 120 | 102 | 138 | 9.00 | 18.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | Urease kinetic |
| | mg/dl | 124 | 105 | 143 | 9.50 | 19.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | BUN |
| | mg/dl | 57.8 | 49.1 | 66.5 | 4.35 | 8.70 | |



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## BIOSYSTEMS A15

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.4 | 25.8 | 35.0 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.04 | 2.58 | 3.50 | 0.23 | 0.46 | |
| Alkaline Phosphatase | U/l | 361 | 307 | 415 | 27.00 | 54.00 | AMP optimised to IFCC 37°C |
| | U/l | 281 | 239 | 323 | 21.00 | 42.00 | AMP optimised to IFCC 30°C |
| | U/l | 231 | 196 | 266 | 17.50 | 35.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 146 | 117 | 175 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 108 | 87 | 129 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 82 | 66 | 98 | 8.00 | 16.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 157 | 125 | 189 | 16.00 | 32.00 | Tris buffer without P5P 37°C |
| | U/l | 106 | 85 | 127 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 75 | 60 | 90 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| Calcium | mmol/l | 3.09 | 2.78 | 3.40 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.4 | 11.1 | 13.7 | 0.65 | 1.30 | |
| Cholesterol | mmol/l | 7.56 | 6.57 | 8.55 | 0.50 | 0.99 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 292 | 254 | 330 | 19.00 | 38.00 | |
| Creatinine | µmol/l | 389 | 311 | 467 | 39.00 | 78.00 | Jaffe rate blanked |
| | mg/dl | 4.40 | 3.51 | 5.29 | 0.45 | 0.89 | |
| gamma-GT | U/l | 179 | 152 | 206 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 141 | 120 | 162 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 110 | 94 | 126 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.5 | 13.2 | 17.8 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 279 | 238 | 320 | 20.50 | 41.00 | |



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## BIOSYSTEMS A15

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Phosphate Inorganic | mmol/l | 2.45 | 2.08 | 2.82 | 0.19 | 0.37 | Phosphomolybdate UV |
| | mg/dl | 7.60 | 6.45 | 8.75 | 0.58 | 1.15 | |
| Triglycerides | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.57 | 0.50 | 0.65 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.59 | 8.35 | 10.8 | 0.62 | 1.24 | |
| | mmol/l | 0.56 | 0.49 | 0.63 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.39 | 8.16 | 10.6 | 0.62 | 1.23 | |
| | mmol/l | 0.54 | 0.47 | 0.60 | 0.03 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 8.99 | 7.83 | 10.2 | 0.58 | 1.16 | |
| Urea | mmol/l | 18.0 | 15.3 | 20.7 | 1.35 | 2.70 | Urease end point |
| | mg/dl | 108 | 92.0 | 124 | 8.00 | 16.00 | |
| | mmol/l | 19.0 | 16.1 | 21.9 | 1.45 | 2.90 | Urease kinetic |
| | mg/dl | 114 | 96.8 | 131 | 8.60 | 17.20 | |
| | mmol/l | 19.0 | 16.2 | 21.8 | 1.40 | 2.80 | BUN |
| | mg/dl | 53.3 | 45.3 | 61.3 | 4.00 | 8.00 | |



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## BIOSYSTEMS A25

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 31.2 | 26.5 | 35.9 | 2.35 | 4.70 | Bromocresol Green |
| | g/dl | 3.12 | 2.65 | 3.59 | 0.24 | 0.47 | |
| ALT (GPT) | U/l | 148 | 118 | 178 | 15.00 | 30.00 | Tris buffer without P5P 37°C |
| | U/l | 110 | 87 | 133 | 11.50 | 23.00 | Tris buffer without P5P 30°C |
| | U/l | 83 | 66 | 100 | 8.50 | 17.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 163 | 130 | 196 | 16.50 | 33.00 | Tris buffer without P5P 37°C |
| | U/l | 110 | 88 | 132 | 11.00 | 22.00 | Tris buffer without P5P 30°C |
| | U/l | 78 | 62 | 94 | 8.00 | 16.00 | Tris buffer without P5P 25°C |
| Bilirubin Total | µmol/l | 81.2 | 64.2 | 98.2 | 8.50 | 17.00 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.75 | 3.76 | 5.74 | 0.50 | 0.99 | |
| Calcium | mmol/l | 2.94 | 2.65 | 3.23 | 0.15 | 0.29 | Arsenazo III |
| | mg/dl | 11.8 | 10.6 | 13.0 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.64 | 6.65 | 8.63 | 0.50 | 0.99 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 295 | 257 | 333 | 19.00 | 38.00 | |
| | mmol/l | 7.22 | 6.29 | 8.15 | 0.47 | 0.93 | Cholesterol Oxidase - IDMS |
| | mg/dl | 279 | 243 | 315 | 18.00 | 36.00 | |
| Creatinine | µmol/l | 364 | 291 | 437 | 36.50 | 73.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.11 | 3.29 | 4.93 | 0.41 | 0.82 | |
| | µmol/l | 378 | 302 | 454 | 38.00 | 76.00 | Jaffe rate blanked |
| | mg/dl | 4.27 | 3.41 | 5.13 | 0.43 | 0.86 | |
| gamma-GT | U/l | 179 | 152 | 206 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 141 | 120 | 162 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 110 | 94 | 126 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |



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## BIOSYSTEMS A25

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Glucose | mmol/l | 15.6 | 13.3 | 17.9 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 281 | 240 | 322 | 20.50 | 41.00 | |
| HDL - Cholesterol | mmol/l | 2.75 | 2.33 | 3.17 | 0.21 | 0.42 | Direct Clearance Method |
| | mg/dl | 106 | 89.9 | 122 | 8.05 | 16.10 | |
| Protein Total | g/l | 47.2 | 37.8 | 56.6 | 4.70 | 9.40 | Biuret reaction end point |
| | g/dl | 4.72 | 3.78 | 5.66 | 0.47 | 0.94 | |
| Triglycerides | mmol/l | 2.80 | 2.35 | 3.25 | 0.23 | 0.45 | Lipase/GPO-PAP no correction |
| | mg/dl | 248 | 208 | 288 | 20.00 | 40.00 | |
| | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | L/G Kinase EP. no correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| | mmol/l | 2.61 | 2.20 | 3.02 | 0.21 | 0.41 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 231 | 195 | 267 | 18.00 | 36.00 | |
| Uric Acid (Urate) | mmol/l | 0.58 | 0.51 | 0.66 | 0.04 | 0.08 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.79 | 8.52 | 11.1 | 0.64 | 1.27 | |
| | mmol/l | 0.57 | 0.50 | 0.64 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.58 | 8.33 | 10.8 | 0.63 | 1.25 | |
| Urea | mmol/l | 19.0 | 16.1 | 21.9 | 1.45 | 2.90 | Urease end point |
| | mg/dl | 114 | 96.8 | 131 | 8.60 | 17.20 | |
| | mmol/l | 18.8 | 16.0 | 21.6 | 1.40 | 2.80 | Urease kinetic |
| | mg/dl | 113 | 96.2 | 130 | 8.40 | 16.80 | |
| | mmol/l | 18.8 | 16.0 | 21.6 | 1.40 | 2.80 | BUN |
| | mg/dl | 52.8 | 44.9 | 60.7 | 3.95 | 7.90 | |



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# Biotecnica/Wiener BT and CB Series

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.0 | 25.5 | 34.5 | 2.25 | 4.50 | Bromocresol Green |
| | g/dl | 3.00 | 2.55 | 3.45 | 0.23 | 0.45 | |
| ALT (GPT) | U/l | 141 | 113 | 169 | 14.00 | 28.00 | Tris buffer without P5P 37°C |
| | U/l | 104 | 84 | 124 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 79 | 64 | 94 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 153 | 122 | 184 | 15.50 | 31.00 | Tris buffer without P5P 37°C |
| | U/l | 103 | 82 | 124 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 73 | 58 | 88 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 29.1 | 23.0 | 35.2 | 3.05 | 6.10 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.70 | 1.35 | 2.05 | 0.18 | 0.35 | |
| Bilirubin Total | µmol/l | 76.1 | 60.2 | 92.0 | 7.95 | 15.90 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.45 | 3.52 | 5.38 | 0.47 | 0.93 | |
| Calcium | mmol/l | 2.99 | 2.69 | 3.29 | 0.15 | 0.30 | Cresolphthalein complexone |
| | mg/dl | 12.0 | 10.8 | 13.2 | 0.60 | 1.20 | |
| | mmol/l | 3.00 | 2.70 | 3.30 | 0.15 | 0.30 | Arsenazo III |
| | mg/dl | 12.0 | 10.8 | 13.2 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.51 | 6.53 | 8.49 | 0.49 | 0.98 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 290 | 252 | 328 | 19.00 | 38.00 | |
| | mmol/l | 7.62 | 6.63 | 8.61 | 0.50 | 0.99 | Cholesterol Oxidase - IDMS |
| | mg/dl | 294 | 256 | 332 | 19.00 | 38.00 | |
| Chloride | mmol/l | 110 | 104 | 116 | 3.00 | 6.00 | Colorimetric |



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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Cholinesterase | U/l | 4743 | 3794 | 5692 | 474.50 | 949.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 523 | 429 | 617 | 47.00 | 94.00 | CK-NAC (IFCC) 37°C |
| | U/l | 327 | 269 | 385 | 29.00 | 58.00 | CK-NAC (IFCC) 30°C |
| | U/l | 222 | 182 | 262 | 20.00 | 40.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 384 | 307 | 461 | 38.50 | 77.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.34 | 3.47 | 5.21 | 0.44 | 0.87 | |
| | µmol/l | 380 | 304 | 456 | 38.00 | 76.00 | Jaffe rate blanked |
| | mg/dl | 4.29 | 3.44 | 5.14 | 0.43 | 0.85 | |
| | µmol/l | 358 | 286 | 430 | 36.00 | 72.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.05 | 3.23 | 4.87 | 0.41 | 0.82 | |
| gamma-GT | U/l | 169 | 144 | 194 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 133 | 113 | 153 | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 104 | 89 | 119 | 7.50 | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 169 | 144 | 194 | 12.50 | 25.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 133 | 113 | 153 | 10.00 | 20.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 104 | 89 | 119 | 7.50 | 15.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.5 | 13.2 | 17.8 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 279 | 238 | 320 | 20.50 | 41.00 | |
| HDL - Cholesterol | mmol/l | 2.36 | 2.01 | 2.71 | 0.18 | 0.35 | Direct Clearance Method |
| | mg/dl | 91.1 | 77.6 | 105 | 6.75 | 13.50 | |
| LD (LDH) | U/l | 654 | 556 | 752 | 49.00 | 98.00 | P->L Scandinavian & Dutch 37°C |
| | U/l | 472 | 401 | 543 | 35.50 | 71.00 | P->L Scandinavian & Dutch 30°C |
| | U/l | 332 | 282 | 382 | 25.00 | 50.00 | P->L Scandinavian & Dutch 25°C |
| | U/l | 614 | 522 | 706 | 46.00 | 92.00 | P->L German methods 37°C |
| | U/l | 443 | 377 | 509 | 33.00 | 66.00 | P->L German methods 30°C |
| | U/l | 311 | 265 | 357 | 23.00 | 46.00 | P->L German methods 25°C |



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**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Phosphate Inorganic | mmol/l | 2.32 | 1.97 | 2.67 | 0.18 | 0.35 | Phosphomolybdate UV |
| | mg/dl | 7.19 | 6.11 | 8.27 | 0.54 | 1.08 | |
| Potassium | mmol/l | 6.08 | 5.78 | 6.38 | 0.15 | 0.30 | ISE method - direct |
| Protein Total | g/l | 50.1 | 40.1 | 60.1 | 5.00 | 10.00 | Biuret reaction end point |
| | g/dl | 5.01 | 4.01 | 6.01 | 0.50 | 1.00 | |
| Sodium | mmol/l | 157 | 150 | 164 | 3.50 | 7.00 | ISE method - direct |
| Triglycerides | mmol/l | 2.83 | 2.38 | 3.28 | 0.23 | 0.45 | Lipase/GPO-PAP no correction |
| | mg/dl | 250 | 211 | 289 | 19.50 | 39.00 | |
| Uric Acid (Urate) | mmol/l | 0.57 | 0.50 | 0.65 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.59 | 8.35 | 10.8 | 0.62 | 1.24 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.27 | 8.06 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.57 | 0.49 | 0.64 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.53 | 8.28 | 10.8 | 0.63 | 1.25 | |
| Urea | mmol/l | 19.8 | 16.8 | 22.8 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 119 | 101 | 137 | 9.00 | 18.00 | |
| | mmol/l | 19.8 | 16.8 | 22.8 | 1.50 | 3.00 | BUN |
| | mg/dl | 55.6 | 47.3 | 63.9 | 4.15 | 8.30 | |



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## COBAS INTEGRA®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.9 | 26.3 | 35.5 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.09 | 2.63 | 3.55 | 0.23 | 0.46 | |
| | g/l | 31.3 | 26.6 | 36.0 | 2.35 | 4.70 | Turbidimetric Assays |
| | g/dl | 3.13 | 2.66 | 3.60 | 0.24 | 0.47 | |
| Alkaline Phosphatase | U/l | 326 | 278 | 374 | 24.00 | 48.00 | Roche Integra AMP buffer 37°C |
| | U/l | 254 | 217 | 291 | 18.50 | 37.00 | Roche Integra AMP buffer 30°C |
| | U/l | 208 | 178 | 238 | 15.00 | 30.00 | Roche Integra AMP buffer 25°C |
| | U/l | 326 | 277 | 375 | 24.50 | 49.00 | AMP optimised to IFCC 37°C |
| | U/l | 254 | 216 | 292 | 19.00 | 38.00 | AMP optimised to IFCC 30°C |
| | U/l | 208 | 177 | 239 | 15.50 | 31.00 | AMP optimised to IFCC 25°C |
| | U/l | 330 | 280 | 380 | 25.00 | 50.00 | Colorimetric 37°C |
| | U/l | 257 | 218 | 296 | 19.50 | 39.00 | Colorimetric 30°C |
| | U/l | 211 | 179 | 243 | 16.00 | 32.00 | Colorimetric 25°C |
| ALT (GPT) | U/l | 130 | 104 | 156 | 13.00 | 26.00 | Tris buffer without P5P 37°C |
| | U/l | 96 | 77 | 115 | 9.50 | 19.00 | Tris buffer without P5P 30°C |
| | U/l | 73 | 59 | 87 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 266 | 226 | 306 | 20.00 | 40.00 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 265 | 225 | 305 | 20.00 | 40.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 147 | 117 | 177 | 15.00 | 30.00 | Tris buffer without P5P 37°C |
| | U/l | 99 | 79 | 119 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 70 | 56 | 84 | 7.00 | 14.00 | Tris buffer without P5P 25°C |



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**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bicarbonate | mmol/l | 14.9 | 11.8 | 18.0 | 1.55 | 3.10 | Enzymatic |
| Bilirubin Direct | µmol/l | 30.4 | 24.0 | 36.8 | 3.20 | 6.40 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.78 | 1.40 | 2.16 | 0.19 | 0.38 | |
| | µmol/l | 30.1 | 23.7 | 36.5 | 3.20 | 6.40 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.76 | 1.39 | 2.13 | 0.19 | 0.37 | |
| | µmol/l | 30.4 | 24.0 | 36.8 | 3.20 | 6.40 | Roche DPD JG standardised |
| | mg/dl | 1.78 | 1.40 | 2.16 | 0.19 | 0.38 | |
| | µmol/l | 31.1 | 24.6 | 37.6 | 3.25 | 6.50 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.82 | 1.44 | 2.20 | 0.19 | 0.38 | |
| | µmol/l | 29.8 | 23.5 | 36.1 | 3.15 | 6.30 | Roche DPD Doumas standardised |
| | mg/dl | 1.74 | 1.37 | 2.11 | 0.19 | 0.37 | |
| Bilirubin Total | µmol/l | 77.5 | 61.2 | 93.8 | 8.15 | 16.30 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.53 | 3.58 | 5.48 | 0.48 | 0.95 | |
| | µmol/l | 75.9 | 60.0 | 91.8 | 7.95 | 15.90 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.44 | 3.51 | 5.37 | 0.47 | 0.93 | |
| | µmol/l | 76.7 | 60.6 | 92.8 | 8.05 | 16.10 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.49 | 3.55 | 5.43 | 0.47 | 0.94 | |
| | µmol/l | 77.0 | 60.9 | 93.1 | 8.05 | 16.10 | Diazonium ion |
| | mg/dl | 4.50 | 3.56 | 5.44 | 0.47 | 0.94 | |
| Calcium | mmol/l | 3.12 | 2.81 | 3.43 | 0.16 | 0.31 | Cresolphthalein complexone |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| | mmol/l | 3.12 | 2.81 | 3.43 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| | mmol/l | 3.10 | 2.79 | 3.41 | 0.16 | 0.31 | NM-BAPTA |
| | mg/dl | 12.4 | 11.2 | 13.6 | 0.60 | 1.20 | |



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**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Cholesterol | mmol/l | 7.47 | 6.50 | 8.44 | 0.49 | 0.97 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 288 | 251 | 325 | 18.50 | 37.00 | |
| | mmol/l | 7.50 | 6.52 | 8.48 | 0.49 | 0.98 | Cholesterol Oxidase - IDMS |
| | mg/dl | 290 | 252 | 328 | 19.00 | 38.00 | |
| Chloride | mmol/l | 113 | 107 | 119 | 3.00 | 6.00 | ISE indirect |
| CK Total | U/l | 493 | 404 | 582 | 44.50 | 89.00 | CK-NAC serum start (DGKC) 37°C |
| | U/l | 309 | 253 | 365 | 28.00 | 56.00 | CK-NAC serum start (DGKC) 30°C |
| | U/l | 210 | 172 | 248 | 19.00 | 38.00 | CK-NAC serum start (DGKC) 25°C |
| | U/l | 492 | 403 | 581 | 44.50 | 89.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 308 | 252 | 364 | 28.00 | 56.00 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 209 | 171 | 247 | 19.00 | 38.00 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 490 | 402 | 578 | 44.00 | 88.00 | CK-NAC (IFCC) 37°C |
| | U/l | 307 | 252 | 362 | 27.50 | 55.00 | CK-NAC (IFCC) 30°C |
| | U/l | 208 | 171 | 245 | 18.50 | 37.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 382 | 306 | 458 | 38.00 | 76.00 | Alkaline picrate with deproteinization |
| | mg/dl | 4.32 | 3.46 | 5.18 | 0.43 | 0.86 | |
| | µmol/l | 392 | 313 | 471 | 39.50 | 79.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.43 | 3.54 | 5.32 | 0.45 | 0.89 | |
| | µmol/l | 401 | 321 | 481 | 40.00 | 80.00 | Roche Creatinine Plus |
| | mg/dl | 4.53 | 3.63 | 5.43 | 0.45 | 0.90 | |
| | µmol/l | 384 | 308 | 460 | 38.00 | 76.00 | Jaffe rate blanked |
| | mg/dl | 4.34 | 3.48 | 5.20 | 0.43 | 0.86 | |
| | µmol/l | 385 | 308 | 462 | 38.50 | 77.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.35 | 3.48 | 5.22 | 0.44 | 0.87 | |
| | µmol/l | 386 | 309 | 463 | 38.50 | 77.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.36 | 3.49 | 5.23 | 0.44 | 0.87 | |



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**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 391 | 313 | 469 | 39.00 | 78.00 | IDMS traceable |
| | mg/dl | 4.42 | 3.54 | 5.30 | 0.44 | 0.88 | |
| gamma-GT | U/l | 169 | 144 | 194 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 133 | 113 | 153 | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 104 | 89 | 119 | 7.50 | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 180 | 153 | 207 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 142 | 121 | 163 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 111 | 94 | 128 | 8.50 | 17.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.9 | 13.5 | 18.3 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 287 | 243 | 331 | 22.00 | 44.00 | |
| | mmol/l | 15.6 | 13.3 | 17.9 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 281 | 240 | 322 | 20.50 | 41.00 | |
| Iron | µmol/l | 39.4 | 32.3 | 46.5 | 3.55 | 7.10 | Colorimetric with ppt. |
| | µg/dl | 220 | 181 | 259 | 19.50 | 39.00 | |
| | µmol/l | 39.0 | 32.0 | 46.0 | 3.50 | 7.00 | Colorimetric without ppt. |
| | µg/dl | 218 | 179 | 257 | 19.50 | 39.00 | |
| LD (LDH) | U/l | 362 | 308 | 416 | 27.00 | 54.00 | L->P 37°C |
| | U/l | 261 | 222 | 300 | 19.50 | 39.00 | L->P 30°C |
| | U/l | 184 | 156 | 212 | 14.00 | 28.00 | L->P 25°C |
| | U/l | 367 | 312 | 422 | 27.50 | 55.00 | L->P IFCC 37°C |
| | U/l | 265 | 225 | 305 | 20.00 | 40.00 | L->P IFCC 30°C |
| | U/l | 186 | 158 | 214 | 14.00 | 28.00 | L->P IFCC 25°C |
| Lipase | U/l | 63 | 50 | 76 | 6.50 | 13.00 | Roche Colorimetric 37°C |
| | U/l | 62 | 50 | 74 | 6.00 | 12.00 | Roche Turbidimetric with colipase 37°C |



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## COBAS INTEGRA®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 1.87 | 1.65 | 2.09 | 0.11 | 0.22 | Xylidyl Blue |
| | mg/dl | 4.54 | 4.01 | 5.07 | 0.27 | 0.53 | |
| | mmol/l | 1.89 | 1.66 | 2.12 | 0.12 | 0.23 | Chlorphosphonazo III |
| | mg/dl | 4.59 | 4.03 | 5.15 | 0.28 | 0.56 | |
| Phosphate Inorganic | mmol/l | 2.26 | 1.92 | 2.60 | 0.17 | 0.34 | Phosphomolybdate enzymatic |
| | mg/dl | 7.01 | 5.95 | 8.07 | 0.53 | 1.06 | |
| | mmol/l | 2.26 | 1.92 | 2.60 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 7.01 | 5.95 | 8.07 | 0.53 | 1.06 | |
| Potassium | mmol/l | 6.11 | 5.81 | 6.41 | 0.15 | 0.30 | ISE method - indirect |
| Protein Total | g/l | 43.0 | 34.4 | 51.6 | 4.30 | 8.60 | Biuret reaction end point |
| | g/dl | 4.30 | 3.44 | 5.16 | 0.43 | 0.86 | |
| | g/l | 43.0 | 34.4 | 51.6 | 4.30 | 8.60 | Biuret reaction kinetic |
| | g/dl | 4.30 | 3.44 | 5.16 | 0.43 | 0.86 | |
| Sodium | mmol/l | 158 | 150 | 166 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 42.5 | 33.5 | 51.5 | 4.50 | 9.00 | FE+UIBC(saturation with iron) |
| | µg/dl | 238 | 187 | 289 | 25.50 | 51.00 | |
| Triglycerides | mmol/l | 2.94 | 2.47 | 3.41 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 260 | 219 | 301 | 20.50 | 41.00 | |
| | mmol/l | 2.90 | 2.43 | 3.37 | 0.24 | 0.47 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 257 | 215 | 299 | 21.00 | 42.00 | |
| | mmol/l | 2.97 | 2.50 | 3.44 | 0.24 | 0.47 | L/G Kinase EP. no correction |
| | mg/dl | 263 | 221 | 305 | 21.00 | 42.00 | |
| | mmol/l | 2.89 | 2.42 | 3.36 | 0.24 | 0.47 | L/G kinase EP. 0.11 mmol/l correction |
| | mg/dl | 256 | 214 | 298 | 21.00 | 42.00 | |
| | mmol/l | 2.96 | 2.49 | 3.43 | 0.24 | 0.47 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 262 | 220 | 304 | 21.00 | 42.00 | |



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## COBAS INTEGRA®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.56 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.32 | 8.11 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.55 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.29 | 8.08 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.56 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.32 | 8.10 | 10.5 | 0.61 | 1.22 | |
| Urea | mmol/l | 19.2 | 16.3 | 22.1 | 1.45 | 2.90 | Urease end point |
| | mg/dl | 115 | 98.0 | 132 | 8.50 | 17.00 | |
| | mmol/l | 19.4 | 16.5 | 22.3 | 1.45 | 2.90 | Urease kinetic |
| | mg/dl | 117 | 99.2 | 135 | 8.90 | 17.80 | |
| | mmol/l | 19.4 | 16.5 | 22.3 | 1.45 | 2.90 | BUN |
| | mg/dl | 54.4 | 46.2 | 62.6 | 4.10 | 8.20 | |



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# Elitech/Vitalab Selectra Series

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.5 | 25.9 | 35.1 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.05 | 2.59 | 3.51 | 0.23 | 0.46 | |
| ALT (GPT) | U/l | 141 | 113 | 169 | 14.00 | 28.00 | Tris buffer without P5P 37°C |
| AST (GOT) | U/l | 159 | 127 | 191 | 16.00 | 32.00 | Tris buffer without P5P 37°C |
| Bilirubin Total | µmol/l | 74.7 | 59.0 | 90.4 | 7.85 | 15.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.37 | 3.45 | 5.29 | 0.46 | 0.92 | |
| Calcium | mmol/l | 3.07 | 2.76 | 3.38 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.3 | 11.1 | 13.5 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.59 | 6.60 | 8.58 | 0.50 | 0.99 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 293 | 255 | 331 | 19.00 | 38.00 | |
| | mmol/l | 7.58 | 6.60 | 8.56 | 0.49 | 0.98 | Cholesterol Oxidase - IDMS |
| | mg/dl | 293 | 255 | 331 | 19.00 | 38.00 | |
| CK Total | U/l | 512 | 420 | 604 | 46.00 | 92.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 365 | 292 | 438 | 36.50 | 73.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.12 | 3.30 | 4.94 | 0.41 | 0.82 | |
| | µmol/l | 401 | 321 | 481 | 40.00 | 80.00 | Creatinine PAP method |
| | mg/dl | 4.53 | 3.63 | 5.43 | 0.45 | 0.90 | |
| | µmol/l | 360 | 288 | 432 | 36.00 | 72.00 | Jaffe rate blanked |
| | mg/dl | 4.07 | 3.25 | 4.89 | 0.41 | 0.82 | |
| gamma-GT | U/l | 175 | 149 | 201 | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |



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## Elitech/Vitalab Selectra Series

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Glucose | mmol/l | 15.7 | 13.3 | 18.1 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 283 | 240 | 326 | 21.50 | 43.00 | |
| HDL - Cholesterol | mmol/l | 2.74 | 2.33 | 3.15 | 0.21 | 0.41 | HDL - Ultra |
| | mg/dl | 106 | 89.9 | 122 | 8.05 | 16.10 | |
| Iron | µmol/l | 35.1 | 28.7 | 41.5 | 3.20 | 6.40 | Colorimetric without ppt. |
| | µg/dl | 196 | 160 | 232 | 18.00 | 36.00 | |
| LD (LDH) | U/l | 354 | 301 | 407 | 26.50 | 53.00 | L->P IFCC 37°C |
| Phosphate Inorganic | mmol/l | 2.28 | 1.94 | 2.62 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 7.07 | 6.01 | 8.13 | 0.53 | 1.06 | |
| Protein Total | g/l | 49.6 | 39.7 | 59.5 | 4.95 | 9.90 | Biuret reaction end point |
| | g/dl | 4.96 | 3.97 | 5.95 | 0.50 | 0.99 | |
| Triglycerides | mmol/l | 2.81 | 2.36 | 3.26 | 0.23 | 0.45 | Lipase/GPO-PAP no correction |
| | mg/dl | 249 | 209 | 289 | 20.00 | 40.00 | |
| Uric Acid (Urate) | mmol/l | 0.65 | 0.56 | 0.73 | 0.04 | 0.08 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 10.9 | 9.44 | 12.4 | 0.73 | 1.46 | |
| | mmol/l | 0.60 | 0.52 | 0.68 | 0.04 | 0.08 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 10.0 | 8.74 | 11.3 | 0.63 | 1.26 | |
| Urea | mmol/l | 19.3 | 16.4 | 22.2 | 1.45 | 2.90 | Urease kinetic |
| | mg/dl | 116 | 98.6 | 133 | 8.70 | 17.40 | |
| | mmol/l | 19.3 | 16.4 | 22.2 | 1.45 | 2.90 | BUN |
| | mg/dl | 54.2 | 46.1 | 62.3 | 4.05 | 8.10 | |



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## HITACHI SERIES®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 29.9 | 25.4 | 34.4 | 2.25 | 4.50 | Bromocresol Green |
| | g/dl | 2.99 | 2.54 | 3.44 | 0.23 | 0.45 | |
| ALT (GPT) | U/l | 141 | 113 | 169 | 14.00 | 28.00 | Tris buffer without P5P 37°C |
| | U/l | 104 | 84 | 124 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 79 | 64 | 94 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 150 | 120 | 180 | 15.00 | 30.00 | Tris buffer without P5P 37°C |
| | U/l | 101 | 81 | 121 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 71 | 57 | 85 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 26.1 | 20.6 | 31.6 | 2.75 | 5.50 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.53 | 1.21 | 1.85 | 0.16 | 0.32 | |
| | µmol/l | 27.4 | 21.7 | 33.1 | 2.85 | 5.70 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.60 | 1.27 | 1.93 | 0.17 | 0.33 | |
| Bilirubin Total | µmol/l | 84.3 | 66.6 | 102 | 8.85 | 17.70 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.93 | 3.90 | 5.96 | 0.52 | 1.03 | |
| | µmol/l | 83.2 | 65.8 | 101 | 8.70 | 17.40 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.87 | 3.85 | 5.89 | 0.51 | 1.02 | |
| Calcium | mmol/l | 2.91 | 2.62 | 3.20 | 0.15 | 0.29 | Cresolphthalein complexone |
| | mg/dl | 11.7 | 10.5 | 12.9 | 0.60 | 1.20 | |
| | mmol/l | 3.19 | 2.87 | 3.51 | 0.16 | 0.32 | Arsenazo III |
| | mg/dl | 12.8 | 11.5 | 14.1 | 0.65 | 1.30 | |
| Cholesterol | mmol/l | 7.37 | 6.42 | 8.32 | 0.48 | 0.95 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 284 | 248 | 320 | 18.00 | 36.00 | |



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## HITACHI SERIES®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Chloride | mmol/l | 111 | 105 | 117 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 5051 | 4041 | 6061 | 505.00 | 1010.00 | Colorimetric Butyrylthiocholine 37°C |
| Creatinine | µmol/l | 369 | 295 | 443 | 37.00 | 74.00 | Alkaline picrate with deproteinization |
| | mg/dl | 4.17 | 3.33 | 5.01 | 0.42 | 0.84 | |
| | µmol/l | 371 | 297 | 445 | 37.00 | 74.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.19 | 3.36 | 5.02 | 0.42 | 0.83 | |
| | µmol/l | 349 | 279 | 419 | 35.00 | 70.00 | Jaffe rate blanked |
| | mg/dl | 3.94 | 3.15 | 4.73 | 0.40 | 0.79 | |
| gamma-GT | U/l | 167 | 142 | 192 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 132 | 112 | 152 | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 103 | 88 | 118 | 7.50 | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 171 | 145 | 197 | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 135 | 114 | 156 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 106 | 89 | 123 | 8.50 | 17.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.9 | 13.5 | 18.3 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 287 | 243 | 331 | 22.00 | 44.00 | |
| Iron | µmol/l | 38.2 | 31.3 | 45.1 | 3.45 | 6.90 | Colorimetric without ppt. |
| | µg/dl | 214 | 175 | 253 | 19.50 | 39.00 | |
| LD (LDH) | U/l | 350 | 297 | 403 | 26.50 | 53.00 | L->P IFCC 37°C |
| | U/l | 253 | 214 | 292 | 19.50 | 39.00 | L->P IFCC 30°C |
| | U/l | 177 | 151 | 203 | 13.00 | 26.00 | L->P IFCC 25°C |
| Magnesium | mmol/l | 1.87 | 1.64 | 2.10 | 0.12 | 0.23 | Xylidyl Blue |
| | mg/dl | 4.54 | 3.99 | 5.09 | 0.28 | 0.55 | |
| Phosphate Inorganic | mmol/l | 2.36 | 2.00 | 2.72 | 0.18 | 0.36 | Phosphomolybdate UV |
| | mg/dl | 7.32 | 6.20 | 8.44 | 0.56 | 1.12 | |



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## HITACHI SERIES®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Potassium | mmol/l | 6.16 | 5.85 | 6.47 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 46.4 | 37.1 | 55.7 | 4.65 | 9.30 | Biuret reaction end point |
| | g/dl | 4.64 | 3.71 | 5.57 | 0.47 | 0.93 | |
| Sodium | mmol/l | 160 | 152 | 168 | 4.00 | 8.00 | ISE method - indirect |
| Triglycerides | mmol/l | 2.90 | 2.44 | 3.36 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 257 | 216 | 298 | 20.50 | 41.00 | |
| | mmol/l | 2.90 | 2.44 | 3.36 | 0.23 | 0.46 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 257 | 216 | 298 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.17 | 7.98 | 10.4 | 0.60 | 1.19 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.07 | 7.90 | 10.2 | 0.59 | 1.17 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.11 | 7.91 | 10.3 | 0.60 | 1.20 | |
| Urea | mmol/l | 21.2 | 18.0 | 24.4 | 1.60 | 3.20 | Urease end point |
| | mg/dl | 127 | 108 | 146 | 9.50 | 19.00 | |
| | mmol/l | 19.8 | 16.8 | 22.8 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 119 | 101 | 137 | 9.00 | 18.00 | |
| | mmol/l | 19.8 | 16.8 | 22.8 | 1.50 | 3.00 | BUN |
| | mg/dl | 55.6 | 47.3 | 63.9 | 4.15 | 8.30 | |



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## ILab 600®/650®/Aries/Taurus

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.3 | 25.7 | 34.9 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.03 | 2.57 | 3.49 | 0.23 | 0.46 | |
| Alkaline Phosphatase | U/l | 381 | 324 | 438 | 28.50 | 57.00 | Diethanolamine buffer DEA 37°C |
| | U/l | 297 | 252 | 342 | 22.50 | 45.00 | Diethanolamine buffer DEA 30°C |
| | U/l | 243 | 207 | 279 | 18.00 | 36.00 | Diethanolamine buffer DEA 25°C |
| | U/l | 368 | 313 | 423 | 27.50 | 55.00 | AMP optimised to IFCC 37°C |
| | U/l | 287 | 244 | 330 | 21.50 | 43.00 | AMP optimised to IFCC 30°C |
| | U/l | 235 | 200 | 270 | 17.50 | 35.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 130 | 104 | 156 | 13.00 | 26.00 | Tris buffer without P5P 37°C |
| | U/l | 96 | 77 | 115 | 9.50 | 19.00 | Tris buffer without P5P 30°C |
| | U/l | 73 | 59 | 87 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 281 | 239 | 323 | 21.00 | 42.00 | I.L. 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 145 | 116 | 174 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 98 | 78 | 118 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 69 | 55 | 83 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 19.7 | 15.5 | 23.9 | 2.10 | 4.20 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.15 | 0.907 | 1.39 | 0.12 | 0.24 | |
| Bilirubin Total | µmol/l | 82.6 | 65.2 | 100 | 8.70 | 17.40 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.83 | 3.81 | 5.85 | 0.51 | 1.02 | |
| | µmol/l | 88.3 | 69.8 | 107 | 9.25 | 18.50 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 5.17 | 4.08 | 6.26 | 0.55 | 1.09 | |



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RANDOX

## ILab 600®/650®/Aries/Taurus

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Calcium | mmol/l | 3.17 | 2.85 | 3.49 | 0.16 | 0.32 | Cresolphthalein complexone |
| | mg/dl | 12.7 | 11.4 | 14.0 | 0.65 | 1.30 | |
| | mmol/l | 3.14 | 2.82 | 3.46 | 0.16 | 0.32 | Arsenazo III |
| | mg/dl | 12.6 | 11.3 | 13.9 | 0.65 | 1.30 | |
| Cholesterol | mmol/l | 7.55 | 6.57 | 8.53 | 0.49 | 0.98 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 291 | 254 | 328 | 18.50 | 37.00 | |
| Chloride | mmol/l | 110 | 104 | 116 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 5070 | 4056 | 6084 | 507.00 | 1014.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 507 | 416 | 598 | 45.50 | 91.00 | CK-NAC (IFCC) 37°C |
| | U/l | 317 | 260 | 374 | 28.50 | 57.00 | CK-NAC (IFCC) 30°C |
| | U/l | 215 | 177 | 253 | 19.00 | 38.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 395 | 316 | 474 | 39.50 | 79.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.46 | 3.57 | 5.35 | 0.45 | 0.89 | |
| | µmol/l | 423 | 339 | 507 | 42.00 | 84.00 | Enzymatic UV method |
| | mg/dl | 4.78 | 3.83 | 5.73 | 0.48 | 0.95 | |
| | µmol/l | 423 | 338 | 508 | 42.50 | 85.00 | Creatinine PAP method |
| | mg/dl | 4.78 | 3.82 | 5.74 | 0.48 | 0.96 | |
| | µmol/l | 431 | 345 | 517 | 43.00 | 86.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.87 | 3.90 | 5.84 | 0.49 | 0.97 | |
| gamma-GT | U/l | 167 | 142 | 192 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 132 | 112 | 152 | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 103 | 88 | 118 | 7.50 | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 166 | 141 | 191 | 12.50 | 25.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 131 | 111 | 151 | 10.00 | 20.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 102 | 87 | 117 | 7.50 | 15.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |



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## ILab 600®/650®/Aries/Taurus

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Glucose | mmol/l | 15.6 | 13.3 | 17.9 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 281 | 240 | 322 | 20.50 | 41.00 | |
| HDL - Cholesterol | mmol/l | 1.93 | 1.64 | 2.22 | 0.15 | 0.29 | Direct HDL Immunoseparation |
| | mg/dl | 74.5 | 63.3 | 85.7 | 5.60 | 11.20 | |
| | mmol/l | 2.62 | 2.22 | 3.02 | 0.20 | 0.40 | HDL - Ultra |
| | mg/dl | 101 | 85.7 | 116 | 7.65 | 15.30 | |
| Iron | µmol/l | 38.5 | 31.6 | 45.4 | 3.45 | 6.90 | Colorimetric without ppt. |
| | µg/dl | 215 | 177 | 253 | 19.00 | 38.00 | |
| LD (LDH) | U/l | 704 | 599 | 809 | 52.50 | 105.00 | P->L German methods 37°C |
| | U/l | 508 | 432 | 584 | 38.00 | 76.00 | P->L German methods 30°C |
| | U/l | 357 | 304 | 410 | 26.50 | 53.00 | P->L German methods 25°C |
| Lipase | U/l | 65 | 52 | 78 | 6.50 | 13.00 | Other Colorimetric 37°C |
| Magnesium | mmol/l | 1.96 | 1.72 | 2.20 | 0.12 | 0.24 | Xylidyl Blue |
| | mg/dl | 4.76 | 4.18 | 5.34 | 0.29 | 0.58 | |
| | mmol/l | 1.94 | 1.70 | 2.18 | 0.12 | 0.24 | Enzymatic |
| | mg/dl | 4.71 | 4.13 | 5.29 | 0.29 | 0.58 | |
| Phosphate Inorganic | mmol/l | 2.21 | 1.88 | 2.54 | 0.17 | 0.33 | Phosphomolybdate UV |
| | mg/dl | 6.85 | 5.83 | 7.87 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.11 | 5.80 | 6.42 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 45.3 | 36.3 | 54.3 | 4.50 | 9.00 | Biuret reaction end point |
| | g/dl | 4.53 | 3.63 | 5.43 | 0.45 | 0.90 | |
| Sodium | mmol/l | 159 | 151 | 167 | 4.00 | 8.00 | ISE method - indirect |
| Triglycerides | mmol/l | 2.92 | 2.45 | 3.39 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 258 | 217 | 299 | 20.50 | 41.00 | |
| | mmol/l | 2.85 | 2.40 | 3.30 | 0.23 | 0.45 | L/G Kinase EP. no correction |
| | mg/dl | 252 | 212 | 292 | 20.00 | 40.00 | |



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## ILab 600®/650®/Aries/Taurus

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.53 | 0.46 | 0.59 | 0.03 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 8.82 | 7.68 | 9.96 | 0.57 | 1.14 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.06 | 7.88 | 10.2 | 0.59 | 1.18 | |
| Urea | mmol/l | 21.1 | 17.9 | 24.3 | 1.60 | 3.20 | Urease end point |
| | mg/dl | 127 | 108 | 146 | 9.50 | 19.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | Urease kinetic |
| | mg/dl | 124 | 105 | 143 | 9.50 | 19.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | BUN |
| | mg/dl | 57.8 | 49.1 | 66.5 | 4.35 | 8.70 | |



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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28** **Range**

| Analyte | unit | Target | low | high | 1SD | 2SD | methods |
|---|---|---|---|---|---|---|---|
| Albumin | g/l | 29.1 | 24.7 | 33.5 | 2.20 | 4.40 | Bromocresol Green |
| | g/dl | 2.91 | 2.47 | 3.35 | 0.22 | 0.44 | |
| Alkaline Phosphatase | U/l | 336 | 286 | 386 | 25.00 | 50.00 | AMP optimised to IFCC 37°C |
| | U/l | 262 | 223 | 301 | 19.50 | 39.00 | AMP optimised to IFCC 30°C |
| | U/l | 215 | 183 | 247 | 16.00 | 32.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 145 | 116 | 174 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 107 | 86 | 128 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 82 | 65 | 99 | 8.50 | 17.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 165 | 132 | 198 | 16.50 | 33.00 | Tris buffer without P5P 37°C |
| | U/l | 112 | 89 | 135 | 11.50 | 23.00 | Tris buffer without P5P 30°C |
| | U/l | 79 | 63 | 95 | 8.00 | 16.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 24.2 | 19.1 | 29.3 | 2.55 | 5.10 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.42 | 1.12 | 1.72 | 0.15 | 0.30 | |
| Bilirubin Total | µmol/l | 78.6 | 62.1 | 95.1 | 8.25 | 16.50 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.60 | 3.63 | 5.57 | 0.49 | 0.97 | |
| | µmol/l | 78.0 | 61.6 | 94.4 | 8.20 | 16.40 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.56 | 3.60 | 5.52 | 0.48 | 0.96 | |
| | µmol/l | 79.7 | 63.0 | 96.4 | 8.35 | 16.70 | Nitrobenzenediazonium salt |
| | mg/dl | 4.66 | 3.69 | 5.63 | 0.49 | 0.97 | |
| Calcium | mmol/l | 3.21 | 2.89 | 3.53 | 0.16 | 0.32 | Arsenazo III |
| | mg/dl | 12.9 | 11.6 | 14.2 | 0.65 | 1.30 | |



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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Cholesterol | mmol/l | 7.47 | 6.50 | 8.44 | 0.49 | 0.97 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 288 | 251 | 325 | 18.50 | 37.00 | |
| | mmol/l | 7.43 | 6.47 | 8.39 | 0.48 | 0.96 | Cholesterol Oxidase - IDMS |
| | mg/dl | 287 | 250 | 324 | 18.50 | 37.00 | |
| Chloride | mmol/l | 115 | 109 | 121 | 3.00 | 6.00 | ISE direct |
| CK Total | U/l | 499 | 410 | 588 | 44.50 | 89.00 | CK-NAC (IFCC) 37°C |
| | U/l | 312 | 257 | 367 | 27.50 | 55.00 | CK-NAC (IFCC) 30°C |
| | U/l | 212 | 174 | 250 | 19.00 | 38.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 379 | 303 | 455 | 38.00 | 76.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.28 | 3.42 | 5.14 | 0.43 | 0.86 | |
| | µmol/l | 409 | 328 | 490 | 40.50 | 81.00 | Enzymatic UV method |
| | mg/dl | 4.62 | 3.71 | 5.53 | 0.46 | 0.91 | |
| | µmol/l | 420 | 336 | 504 | 42.00 | 84.00 | Creatinine PAP method |
| | mg/dl | 4.75 | 3.80 | 5.70 | 0.48 | 0.95 | |
| | µmol/l | 362 | 289 | 435 | 36.50 | 73.00 | Jaffe rate blanked |
| | mg/dl | 4.09 | 3.27 | 4.91 | 0.41 | 0.82 | |
| | µmol/l | 379 | 303 | 455 | 38.00 | 76.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.28 | 3.42 | 5.14 | 0.43 | 0.86 | |
| gamma-GT | U/l | 177 | 151 | 203 | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 139 | 119 | 159 | 10.00 | 20.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 109 | 93 | 125 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.8 | 13.5 | 18.1 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 285 | 243 | 327 | 21.00 | 42.00 | |
| | mmol/l | 15.7 | 13.3 | 18.1 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 283 | 240 | 326 | 21.50 | 43.00 | |



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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 2.24 | 1.91 | 2.57 | 0.17 | 0.33 | Direct HDL Immunoseparation |
| | mg/dl | 86.5 | 73.7 | 99.3 | 6.40 | 12.80 | |
| | mmol/l | 2.61 | 2.22 | 3.00 | 0.20 | 0.39 | Direct HDL PEGME |
| | mg/dl | 101 | 85.7 | 116 | 7.65 | 15.30 | |
| Iron | µmol/l | 39.2 | 32.2 | 46.2 | 3.50 | 7.00 | Colorimetric without ppt. |
| | µg/dl | 219 | 180 | 258 | 19.50 | 39.00 | |
| LD (LDH) | U/l | 375 | 319 | 431 | 28.00 | 56.00 | L->P IFCC 37°C |
| | U/l | 271 | 230 | 312 | 20.50 | 41.00 | L->P IFCC 30°C |
| | U/l | 190 | 162 | 218 | 14.00 | 28.00 | L->P IFCC 25°C |
| Phosphate Inorganic | mmol/l | 2.34 | 1.99 | 2.69 | 0.18 | 0.35 | Phosphomolybdate enzymatic |
| | mg/dl | 7.25 | 6.17 | 8.33 | 0.54 | 1.08 | |
| | mmol/l | 2.22 | 1.88 | 2.56 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 6.88 | 5.83 | 7.93 | 0.53 | 1.05 | |
| Potassium | mmol/l | 5.93 | 5.64 | 6.22 | 0.15 | 0.29 | ISE method - direct |
| Protein Total | g/l | 46.3 | 37.0 | 55.6 | 4.65 | 9.30 | Biuret reaction end point |
| | g/dl | 4.63 | 3.70 | 5.56 | 0.47 | 0.93 | |
| Sodium | mmol/l | 155 | 147 | 163 | 4.00 | 8.00 | ISE method - direct |
| Triglycerides | mmol/l | 2.94 | 2.47 | 3.41 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 260 | 219 | 301 | 20.50 | 41.00 | |
| | mmol/l | 2.96 | 2.48 | 3.44 | 0.24 | 0.48 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 262 | 219 | 305 | 21.50 | 43.00 | |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.31 | 8.10 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.56 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.32 | 8.11 | 10.5 | 0.61 | 1.21 | |



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

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.57 | 0.49 | 0.64 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.53 | 8.28 | 10.8 | 0.63 | 1.25 | |
| Urea | mmol/l | 19.3 | 16.4 | 22.2 | 1.45 | 2.90 | Urease end point |
| | mg/dl | 116 | 98.6 | 133 | 8.70 | 17.40 | |
| | mmol/l | 19.7 | 16.7 | 22.7 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 118 | 100 | 136 | 9.00 | 18.00 | |
| | mmol/l | 19.7 | 16.7 | 22.7 | 1.50 | 3.00 | BUN |
| | mg/dl | 55.3 | 47.0 | 63.6 | 4.15 | 8.30 | |



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# MINDRAY BS SERIES

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 29.0 | 24.6 | 33.4 | 2.20 | 4.40 | Bromocresol Green |
| | g/dl | 2.90 | 2.46 | 3.34 | 0.22 | 0.44 | |
| Alkaline Phosphatase | U/l | 359 | 305 | 413 | 27.00 | 54.00 | AMP optimised to IFCC 37°C |
| | U/l | 280 | 238 | 322 | 21.00 | 42.00 | AMP optimised to IFCC 30°C |
| | U/l | 229 | 195 | 263 | 17.00 | 34.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 146 | 117 | 175 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 108 | 87 | 129 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 82 | 66 | 98 | 8.00 | 16.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 157 | 126 | 188 | 15.50 | 31.00 | Tris buffer without P5P 37°C |
| | U/l | 106 | 85 | 127 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 75 | 60 | 90 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 28.0 | 22.1 | 33.9 | 2.95 | 5.90 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.64 | 1.29 | 1.99 | 0.18 | 0.35 | |
| | µmol/l | 28.4 | 22.4 | 34.4 | 3.00 | 6.00 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.66 | 1.31 | 2.01 | 0.18 | 0.35 | |
| Bilirubin Total | µmol/l | 82.6 | 65.3 | 99.9 | 8.65 | 17.30 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.83 | 3.82 | 5.84 | 0.51 | 1.01 | |
| | µmol/l | 85.5 | 67.5 | 104 | 9.00 | 18.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 5.00 | 3.95 | 6.05 | 0.53 | 1.05 | |
| | µmol/l | 81.5 | 64.4 | 98.6 | 8.55 | 17.10 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.77 | 3.77 | 5.77 | 0.50 | 1.00 | |



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## MINDRAY BS SERIES

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 83.8 | 66.2 | 101 | 8.80 | 17.60 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 4.90 | 3.87 | 5.93 | 0.52 | 1.03 | |
| Calcium | mmol/l | 3.12 | 2.81 | 3.43 | 0.16 | 0.31 | Cresolphthalein complexone |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| | mmol/l | 3.13 | 2.82 | 3.44 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.46 | 6.49 | 8.43 | 0.49 | 0.97 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 288 | 251 | 325 | 18.50 | 37.00 | |
| | mmol/l | 7.38 | 6.42 | 8.34 | 0.48 | 0.96 | Cholesterol Oxidase - IDMS |
| | mg/dl | 285 | 248 | 322 | 18.50 | 37.00 | |
| | mmol/l | 7.55 | 6.57 | 8.53 | 0.49 | 0.98 | Cholesterol Dehydrogenase |
| | mg/dl | 291 | 254 | 328 | 18.50 | 37.00 | |
| Chloride | mmol/l | 114 | 108 | 120 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 5123 | 4098 | 6148 | 512.50 | 1025.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 503 | 412 | 594 | 45.50 | 91.00 | CK-NAC (IFCC) 37°C |
| | U/l | 315 | 258 | 372 | 28.50 | 57.00 | CK-NAC (IFCC) 30°C |
| | U/l | 214 | 175 | 253 | 19.50 | 39.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 376 | 301 | 451 | 37.50 | 75.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.25 | 3.40 | 5.10 | 0.43 | 0.85 | |
| | µmol/l | 408 | 327 | 489 | 40.50 | 81.00 | Enzymatic UV method |
| | mg/dl | 4.61 | 3.70 | 5.52 | 0.46 | 0.91 | |
| | µmol/l | 404 | 323 | 485 | 40.50 | 81.00 | Creatinine PAP method |
| | mg/dl | 4.57 | 3.65 | 5.49 | 0.46 | 0.92 | |
| | µmol/l | 376 | 301 | 451 | 37.50 | 75.00 | Jaffe rate blanked |
| | mg/dl | 4.25 | 3.40 | 5.10 | 0.43 | 0.85 | |



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RANDOX

## MINDRAY BS SERIES

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 175 | 149 | 201 | 13.00 | 26.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 138 | 117 | 159 | 10.50 | 21.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 108 | 92 | 124 | 8.00 | 16.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 175 | 149 | 201 | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 138 | 117 | 159 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 108 | 92 | 124 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.6 | 13.3 | 17.9 | 1.15 | 2.30 | Glucose dehydrogenase |
| | mg/dl | 281 | 240 | 322 | 20.50 | 41.00 | |
| | mmol/l | 15.7 | 13.3 | 18.1 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 283 | 240 | 326 | 21.50 | 43.00 | |
| | mmol/l | 15.6 | 13.3 | 17.9 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 281 | 240 | 322 | 20.50 | 41.00 | |
| HDL - Cholesterol | mmol/l | 2.49 | 2.12 | 2.86 | 0.19 | 0.37 | Direct HDL PPD |
| | mg/dl | 96.1 | 81.8 | 110 | 7.15 | 14.30 | |
| | mmol/l | 2.40 | 2.04 | 2.76 | 0.18 | 0.36 | Direct Clearance Method |
| | mg/dl | 92.6 | 78.7 | 107 | 6.95 | 13.90 | |
| | mmol/l | 2.49 | 2.12 | 2.86 | 0.19 | 0.37 | HDL - Ultra |
| | mg/dl | 96.1 | 81.8 | 110 | 7.15 | 14.30 | |
| Iron | µmol/l | 37.6 | 30.8 | 44.4 | 3.40 | 6.80 | Colorimetric with ppt. |
| | µg/dl | 210 | 172 | 248 | 19.00 | 38.00 | |
| | µmol/l | 37.5 | 30.8 | 44.2 | 3.35 | 6.70 | Colorimetric without ppt. |
| | µg/dl | 210 | 172 | 248 | 19.00 | 38.00 | |
| Lactate | mmol/l | 5.44 | 4.46 | 6.42 | 0.49 | 0.98 | Colorimetric Lactate Oxidase |
| | mg/dl | 49.0 | 40.2 | 57.8 | 4.40 | 8.80 | |
| LD (LDH) | U/l | 732 | 622 | 842 | 55.00 | 110.00 | P->L German methods 37°C |
| | U/l | 529 | 449 | 609 | 40.00 | 80.00 | P->L German methods 30°C |
| | U/l | 371 | 315 | 427 | 28.00 | 56.00 | P->L German methods 25°C |



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## MINDRAY BS SERIES

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| LD (LDH) | U/l | 349 | 297 | 401 | 26.00 | 52.00 | L->P IFCC 37°C |
| | U/l | 252 | 214 | 290 | 19.00 | 38.00 | L->P IFCC 30°C |
| | U/l | 177 | 151 | 203 | 13.00 | 26.00 | L->P IFCC 25°C |
| Lipase | U/l | 62 | 50 | 74 | 6.00 | 12.00 | Other Colorimetric 37°C |
| Magnesium | mmol/l | 1.89 | 1.67 | 2.11 | 0.11 | 0.22 | Xylidyl Blue |
| | mg/dl | 4.59 | 4.06 | 5.12 | 0.27 | 0.53 | |
| | mmol/l | 2.01 | 1.77 | 2.25 | 0.12 | 0.24 | Enzymatic |
| | mg/dl | 4.88 | 4.30 | 5.46 | 0.29 | 0.58 | |
| Phosphate Inorganic | mmol/l | 2.03 | 1.72 | 2.34 | 0.16 | 0.31 | Phosphomolybdate enzymatic |
| | mg/dl | 6.29 | 5.33 | 7.25 | 0.48 | 0.96 | |
| | mmol/l | 2.11 | 1.80 | 2.42 | 0.16 | 0.31 | Phosphomolybdate UV |
| | mg/dl | 6.54 | 5.58 | 7.50 | 0.48 | 0.96 | |
| Potassium | mmol/l | 6.13 | 5.82 | 6.44 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 47.2 | 37.7 | 56.7 | 4.75 | 9.50 | Biuret reaction end point |
| | g/dl | 4.72 | 3.77 | 5.67 | 0.48 | 0.95 | |
| | g/l | 46.4 | 37.1 | 55.7 | 4.65 | 9.30 | Biuret reaction kinetic |
| | g/dl | 4.64 | 3.71 | 5.57 | 0.47 | 0.93 | |
| Sodium | mmol/l | 160 | 152 | 168 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 37.3 | 29.5 | 45.1 | 3.90 | 7.80 | FE+UIBC(saturation with iron) |
| | µg/dl | 209 | 165 | 253 | 22.00 | 44.00 | |
| Triglycerides | mmol/l | 2.82 | 2.37 | 3.27 | 0.23 | 0.45 | Lipase/GPO-PAP no correction |
| | mg/dl | 250 | 210 | 290 | 20.00 | 40.00 | |
| | mmol/l | 2.84 | 2.39 | 3.29 | 0.23 | 0.45 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 251 | 212 | 290 | 19.50 | 39.00 | |



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## MINDRAY BS SERIES

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 2.78 | 2.34 | 3.22 | 0.22 | 0.44 | L/G Kinase EP. no correction |
| | mg/dl | 246 | 207 | 285 | 19.50 | 39.00 | |
| | mmol/l | 2.77 | 2.32 | 3.22 | 0.23 | 0.45 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 245 | 205 | 285 | 20.00 | 40.00 | |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.47 | 0.62 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.16 | 7.96 | 10.4 | 0.60 | 1.20 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.21 | 8.00 | 10.4 | 0.61 | 1.21 | |
| | mmol/l | 0.55 | 0.47 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.16 | 7.96 | 10.4 | 0.60 | 1.20 | |
| Urea | mmol/l | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | Urease end point |
| | mg/dl | 121 | 103 | 139 | 9.00 | 18.00 | |
| | mmol/l | 20.2 | 17.1 | 23.3 | 1.55 | 3.10 | Urease kinetic |
| | mg/dl | 121 | 103 | 139 | 9.00 | 18.00 | |
| | mmol/l | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | BUN |
| | mg/dl | 56.7 | 48.2 | 65.2 | 4.25 | 8.50 | |



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## Ortho VITROS®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 29.2 | 24.8 | 33.6 | 2.20 | 4.40 | Ortho Vitros Microslide Systems |
| | g/dl | 2.92 | 2.48 | 3.36 | 0.22 | 0.44 | |
| Alkaline Phosphatase | U/l | 280 | 238 | 322 | 21.00 | 42.00 | Ortho Vitros Microslide Systems 37°C |
| ALT (GPT) | U/l | 145 | 116 | 174 | 14.50 | 29.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 144 | 115 | 173 | 14.50 | 29.00 | Ortho Vitros MicroSlide visible 37°C |
| Amylase Total | U/l | 169 | 144 | 194 | 12.50 | 25.00 | Ortho Vitros Microslide Systems 37°C |
| AST (GOT) | U/l | 192 | 154 | 230 | 19.00 | 38.00 | Ortho Vitros Microslide Systems 37°C |
| Bicarbonate | mmol/l | 17.3 | 13.7 | 20.9 | 1.80 | 3.60 | Ortho Vitros Microslide Systems |
| Bilirubin Total | µmol/l | 74.8 | 59.1 | 90.5 | 7.85 | 15.70 | Vitros 250/500/700/950 Total Bilirubin |
| Calcium | mmol/l | 3.00 | 2.70 | 3.30 | 0.15 | 0.30 | Ortho Vitros Microslide Systems |
| | mg/dl | 12.0 | 10.8 | 13.2 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.12 | 6.19 | 8.05 | 0.47 | 0.93 | Ortho Vitros Microslide Systems |
| | mg/dl | 275 | 239 | 311 | 18.00 | 36.00 | |
| Chloride | mmol/l | 114 | 108 | 120 | 3.00 | 6.00 | Ortho Vitros Microslide Systems |
| Cholinesterase | U/l | 4895 | 3916 | 5874 | 489.50 | 979.00 | Ortho Vitros Microslide Systems 37°C |
| CK Total | U/l | 406 | 333 | 479 | 36.50 | 73.00 | Ortho Vitros Microslide Systems 37°C |
| Creatinine | µmol/l | 417 | 334 | 500 | 41.50 | 83.00 | Vitros DT60/DT60 II/DTSC II |
| | mg/dl | 4.71 | 3.77 | 5.65 | 0.47 | 0.94 | |
| | µmol/l | 412 | 330 | 494 | 41.00 | 82.00 | Vitros IDMS Traceable |
| | mg/dl | 4.66 | 3.73 | 5.59 | 0.47 | 0.93 | |
| Free T4 | pmol/l | 89.7 | 67.3 | 112 | 11.20 | 22.40 | Vitros ECi |
| | ng/dl | 7.00 | 5.25 | 8.75 | 0.88 | 1.75 | |
| | pg/ml | 70.0 | 52.5 | 87.5 | 8.75 | 17.50 | Vitros ECi |



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## Ortho VITROS®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 204 | 173 | 235 | 15.50 | 31.00 | Ortho Vitros Microslide Systems 37°C |
| Glucose | mmol/l | 14.8 | 12.5 | 17.1 | 1.15 | 2.30 | Ortho Vitros Microslide Systems |
| | mg/dl | 267 | 225 | 309 | 21.00 | 42.00 | |
| HDL - Cholesterol | mmol/l | 2.27 | 1.93 | 2.61 | 0.17 | 0.34 | Vitros 5.1 FS microtip assay |
| | mg/dl | 87.6 | 74.5 | 101 | 6.55 | 13.10 | |
| | mmol/l | 2.37 | 2.01 | 2.73 | 0.18 | 0.36 | Vitros dHDL PTA/MgCl2 direct precipitation |
| | mg/dl | 91.5 | 77.6 | 105 | 6.95 | 13.90 | |
| Iron | µmol/l | 36.9 | 30.2 | 43.6 | 3.35 | 6.70 | Ortho Vitros Microslide Systems |
| | µg/dl | 206 | 169 | 243 | 18.50 | 37.00 | |
| Lactate | mmol/l | 5.01 | 4.11 | 5.91 | 0.45 | 0.90 | Ortho Vitros Microslide Systems |
| | mg/dl | 45.1 | 37.0 | 53.2 | 4.05 | 8.10 | |
| LD (LDH) | U/l | 381 | 324 | 438 | 28.50 | 57.00 | Ortho Vitros Microslide Systems 37°C |
| Lipase | U/l | 676 | 542 | 810 | 67.00 | 134.00 | Ortho Vitros Microslide Systems 37°C |
| Lithium | mmol/l | 2.42 | 2.13 | 2.71 | 0.15 | 0.29 | Ortho Vitros Microslide Systems |
| | mg/dl | 1.68 | 1.48 | 1.88 | 0.10 | 0.20 | |
| Magnesium | mmol/l | 1.94 | 1.70 | 2.18 | 0.12 | 0.24 | Ortho Vitros Microslide Systems |
| | mg/dl | 4.71 | 4.13 | 5.29 | 0.29 | 0.58 | |
| Phosphate Inorganic | mmol/l | 2.20 | 1.87 | 2.53 | 0.17 | 0.33 | Ortho Vitros Microslide Systems |
| | mg/dl | 6.82 | 5.80 | 7.84 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.00 | 5.70 | 6.30 | 0.15 | 0.30 | Ortho Vitros Microslide Systems |
| Protein Total | g/l | 46.4 | 37.2 | 55.6 | 4.60 | 9.20 | Ortho Vitros Microslide Systems |
| | g/dl | 4.64 | 3.72 | 5.56 | 0.46 | 0.92 | |
| PSA Total | ng/ml = | 16.6 | 12.5 | 20.7 | 2.05 | 4.10 | Ortho Vitros ECi |



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## Ortho VITROS®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Sodium | mmol/l | 155 | 147 | 163 | 4.00 | 8.00 | Ortho Vitros Microslide Systems |
| Total T3 | nmol/l | 4.53 | 3.39 | 5.67 | 0.57 | 1.14 | Vitros ECi |
| | ng/ml | 2.95 | 2.21 | 3.69 | 0.37 | 0.74 | |
| | ng/dl | 295 | 221 | 369 | 37.00 | 74.00 | Vitros ECi |
| Total T4 | nmol/l | 236 | 177 | 295 | 29.50 | 59.00 | Vitros ECi |
| | µg/dl | 18.4 | 13.8 | 23.0 | 2.30 | 4.60 | |
| | ng/ml | 184 | 138 | 230 | 23.00 | 46.00 | Vitros ECi |
| Triglycerides | mmol/l | 3.33 | 2.80 | 3.86 | 0.27 | 0.53 | Ortho Vitros Microslide Systems |
| | mg/dl | 295 | 248 | 342 | 23.50 | 47.00 | |
| Uric Acid (Urate) | mmol/l | 0.52 | 0.45 | 0.59 | 0.03 | 0.07 | Ortho Vitros Microslide Systems |
| | mg/dl | 8.72 | 7.58 | 9.86 | 0.57 | 1.14 | |
| Urea | mmol/l | 18.8 | 16.0 | 21.6 | 1.40 | 2.80 | Ortho Vitros Microslide Systems |
| | mg/dl | 113 | 96.2 | 130 | 8.40 | 16.80 | |
| | mmol/l | 18.8 | 16.0 | 21.6 | 1.40 | 2.80 | BUN |
| | mg/dl | 52.8 | 44.9 | 60.7 | 3.95 | 7.90 | |



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## PRESTIGE 24i

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.1 | 25.6 | 34.6 | 2.25 | 4.50 | Bromocresol Green |
| | g/dl | 3.01 | 2.56 | 3.46 | 0.23 | 0.45 | |
| Alkaline Phosphatase | U/l | 327 | 278 | 376 | 24.50 | 49.00 | AMP optimised to IFCC 37°C |
| | U/l | 255 | 217 | 293 | 19.00 | 38.00 | AMP optimised to IFCC 30°C |
| | U/l | 209 | 178 | 240 | 15.50 | 31.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 145 | 116 | 174 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 107 | 86 | 128 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 82 | 65 | 99 | 8.50 | 17.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 155 | 124 | 186 | 15.50 | 31.00 | Tris buffer without P5P 37°C |
| | U/l | 105 | 84 | 126 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 74 | 59 | 89 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| Bilirubin Total | µmol/l | 92.2 | 72.9 | 112 | 9.65 | 19.30 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 5.39 | 4.26 | 6.52 | 0.57 | 1.13 | |
| Calcium | mmol/l | 2.97 | 2.67 | 3.27 | 0.15 | 0.30 | Arsenazo III |
| | mg/dl | 11.9 | 10.7 | 13.1 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.56 | 6.58 | 8.54 | 0.49 | 0.98 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 292 | 254 | 330 | 19.00 | 38.00 | |
| CK Total | U/l | 477 | 391 | 563 | 43.00 | 86.00 | CK-NAC (IFCC) 37°C |
| | U/l | 299 | 245 | 353 | 27.00 | 54.00 | CK-NAC (IFCC) 30°C |
| | U/l | 203 | 166 | 240 | 18.50 | 37.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 359 | 287 | 431 | 36.00 | 72.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.06 | 3.24 | 4.88 | 0.41 | 0.82 | |



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RANDOX

## PRESTIGE 24i

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 180 | 153 | 207 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 142 | 121 | 163 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 111 | 94 | 128 | 8.50 | 17.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.8 | 13.4 | 18.2 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 285 | 241 | 329 | 22.00 | 44.00 | |
| HDL - Cholesterol | mmol/l | 2.45 | 2.08 | 2.82 | 0.19 | 0.37 | Direct Clearance Method |
| | mg/dl | 94.6 | 80.3 | 109 | 7.15 | 14.30 | |
| LD (LDH) | U/l | 707 | 601 | 813 | 53.00 | 106.00 | P->L German methods 37°C |
| | U/l | 510 | 434 | 586 | 38.00 | 76.00 | P->L German methods 30°C |
| | U/l | 358 | 305 | 411 | 26.50 | 53.00 | P->L German methods 25°C |
| Protein Total | g/l | 47.3 | 37.8 | 56.8 | 4.75 | 9.50 | Biuret reaction end point |
| | g/dl | 4.73 | 3.78 | 5.68 | 0.48 | 0.95 | |
| Triglycerides | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.57 | 0.50 | 0.65 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.64 | 8.40 | 10.9 | 0.62 | 1.24 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.22 | 8.01 | 10.4 | 0.61 | 1.21 | |
| | mmol/l | 0.55 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.31 | 8.10 | 10.5 | 0.61 | 1.21 | |
| Urea | mmol/l | 19.5 | 16.6 | 22.4 | 1.45 | 2.90 | Urease kinetic |
| | mg/dl | 117 | 99.8 | 134 | 8.60 | 17.20 | |
| | mmol/l | 19.5 | 16.6 | 22.4 | 1.45 | 2.90 | BUN |
| | mg/dl | 54.7 | 46.5 | 62.9 | 4.10 | 8.20 | |



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## Roche Cobas C111®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.7 | 26.1 | 35.3 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.07 | 2.61 | 3.53 | 0.23 | 0.46 | |
| Alkaline Phosphatase | U/l | 325 | 276 | 374 | 24.50 | 49.00 | Roche Integra AMP buffer 37°C |
| | U/l | 253 | 215 | 291 | 19.00 | 38.00 | Roche Integra AMP buffer 30°C |
| | U/l | 208 | 176 | 240 | 16.00 | 32.00 | Roche Integra AMP buffer 25°C |
| | U/l | 329 | 280 | 378 | 24.50 | 49.00 | AMP optimised to IFCC 37°C |
| | U/l | 256 | 218 | 294 | 19.00 | 38.00 | AMP optimised to IFCC 30°C |
| | U/l | 210 | 179 | 241 | 15.50 | 31.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 129 | 103 | 155 | 13.00 | 26.00 | Tris buffer without P5P 37°C |
| | U/l | 95 | 76 | 114 | 9.50 | 19.00 | Tris buffer without P5P 30°C |
| | U/l | 73 | 58 | 88 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 265 | 225 | 305 | 20.00 | 40.00 | Other Roche 2-chloro-pNPG7 37°C |
| | U/l | 268 | 228 | 308 | 20.00 | 40.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 146 | 117 | 175 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 99 | 79 | 119 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 69 | 56 | 82 | 6.50 | 13.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 33.0 | 26.1 | 39.9 | 3.45 | 6.90 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.93 | 1.53 | 2.33 | 0.20 | 0.40 | |
| | µmol/l | 31.6 | 24.9 | 38.3 | 3.35 | 6.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.85 | 1.46 | 2.24 | 0.20 | 0.39 | |
| | µmol/l | 32.5 | 25.7 | 39.3 | 3.40 | 6.80 | Roche DPD JG standardised |
| | mg/dl | 1.90 | 1.50 | 2.30 | 0.20 | 0.40 | |



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## Roche Cobas C111®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Direct | µmol/l | 29.4 | 23.2 | 35.6 | 3.10 | 6.20 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.72 | 1.36 | 2.08 | 0.18 | 0.36 | |
| Bilirubin Total | µmol/l | 75.9 | 59.9 | 91.9 | 8.00 | 16.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.44 | 3.50 | 5.38 | 0.47 | 0.94 | |
| | µmol/l | 75.9 | 60.0 | 91.8 | 7.95 | 15.90 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.44 | 3.51 | 5.37 | 0.47 | 0.93 | |
| | µmol/l | 79.5 | 62.8 | 96.2 | 8.35 | 16.70 | Diazonium ion |
| | mg/dl | 4.65 | 3.67 | 5.63 | 0.49 | 0.98 | |
| Calcium | mmol/l | 3.15 | 2.83 | 3.47 | 0.16 | 0.32 | Cresolphthalein complexone |
| | mg/dl | 12.6 | 11.3 | 13.9 | 0.65 | 1.30 | |
| | mmol/l | 3.13 | 2.82 | 3.44 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| | mmol/l | 3.11 | 2.80 | 3.42 | 0.16 | 0.31 | NM-BAPTA |
| | mg/dl | 12.5 | 11.2 | 13.8 | 0.65 | 1.30 | |
| Cholesterol | mmol/l | 7.44 | 6.47 | 8.41 | 0.49 | 0.97 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 287 | 250 | 324 | 18.50 | 37.00 | |
| | mmol/l | 7.33 | 6.38 | 8.28 | 0.48 | 0.95 | Cholesterol Oxidase - IDMS |
| | mg/dl | 283 | 246 | 320 | 18.50 | 37.00 | |
| | mmol/l | 7.26 | 6.32 | 8.20 | 0.47 | 0.94 | Cholesterol Dehydrogenase |
| | mg/dl | 280 | 244 | 316 | 18.00 | 36.00 | |
| Chloride | mmol/l | 114 | 109 | 119 | 2.50 | 5.00 | ISE indirect |
| CK Total | U/l | 491 | 403 | 579 | 44.00 | 88.00 | CK-NAC (IFCC) 37°C |
| | U/I | 307 | 252 | 362 | 27.50 | 55.00 | CK-NAC (IFCC) 30°C |
| | U/I | 209 | 171 | 247 | 19.00 | 38.00 | CK-NAC (IFCC) 25°C |



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## Roche Cobas C111®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 387 | 309 | 465 | 39.00 | 78.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.37 | 3.49 | 5.25 | 0.44 | 0.88 | |
| | µmol/l | 384 | 307 | 461 | 38.50 | 77.00 | Roche Creatinine Plus |
| | mg/dl | 4.34 | 3.47 | 5.21 | 0.44 | 0.87 | |
| | µmol/l | 395 | 316 | 474 | 39.50 | 79.00 | Jaffe rate blanked |
| | mg/dl | 4.46 | 3.57 | 5.35 | 0.45 | 0.89 | |
| | µmol/l | 375 | 300 | 450 | 37.50 | 75.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.24 | 3.39 | 5.09 | 0.43 | 0.85 | |
| | µmol/l | 391 | 313 | 469 | 39.00 | 78.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.42 | 3.54 | 5.30 | 0.44 | 0.88 | |
| gamma-GT | U/l | 170 | 145 | 195 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 134 | 114 | 154 | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 105 | 89 | 121 | 8.00 | 16.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 172 | 146 | 198 | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 136 | 115 | 157 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 106 | 90 | 122 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.8 | 13.5 | 18.1 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 285 | 243 | 327 | 21.00 | 42.00 | |
| | mmol/l | 16.2 | 13.7 | 18.7 | 1.25 | 2.50 | Glucose oxidase |
| | mg/dl | 292 | 247 | 337 | 22.50 | 45.00 | |
| HDL - Cholesterol | mmol/l | 2.84 | 2.41 | 3.27 | 0.22 | 0.43 | Direct HDL PEGME |
| | mg/dl | 110 | 93.0 | 127 | 8.50 | 17.00 | |
| | mmol/l | 2.98 | 2.54 | 3.42 | 0.22 | 0.44 | Direct HDL Roche 4th Generation |
| | mg/dl | 115 | 98.0 | 132 | 8.50 | 17.00 | |
| Iron | µmol/l | 38.3 | 31.4 | 45.2 | 3.45 | 6.90 | Colorimetric without ppt. |
| | µg/dl | 214 | 176 | 252 | 19.00 | 38.00 | |



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## Roche Cobas C111®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| LD (LDH) | U/l | 373 | 317 | 429 | 28.00 | 56.00 | L->P IFCC 37°C |
| | U/l | 269 | 229 | 309 | 20.00 | 40.00 | L->P IFCC 30°C |
| | U/l | 189 | 161 | 217 | 14.00 | 28.00 | L->P IFCC 25°C |
| Lipase | U/l | 58 | 46 | 70 | 6.00 | 12.00 | Roche Colorimetric 37°C |
| Magnesium | mmol/l | 1.91 | 1.68 | 2.14 | 0.12 | 0.23 | Xylidyl Blue |
| | mg/dl | 4.64 | 4.08 | 5.20 | 0.28 | 0.56 | |
| | mmol/l | 1.86 | 1.64 | 2.08 | 0.11 | 0.22 | Chlorphosphonazo III |
| | mg/dl | 4.52 | 3.99 | 5.05 | 0.27 | 0.53 | |
| Phosphate Inorganic | mmol/l | 2.26 | 1.92 | 2.60 | 0.17 | 0.34 | Phosphomolybdate enzymatic |
| | mg/dl | 7.01 | 5.95 | 8.07 | 0.53 | 1.06 | |
| | mmol/l | 2.25 | 1.91 | 2.59 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 6.98 | 5.92 | 8.04 | 0.53 | 1.06 | |
| Potassium | mmol/l | 6.06 | 5.76 | 6.36 | 0.15 | 0.30 | ISE method - indirect |
| Protein Total | g/l | 45.2 | 36.1 | 54.3 | 4.55 | 9.10 | Biuret reaction end point |
| | g/dl | 4.52 | 3.61 | 5.43 | 0.46 | 0.91 | |
| Sodium | mmol/l | 157 | 149 | 165 | 4.00 | 8.00 | ISE method - indirect |
| Triglycerides | mmol/l | 2.93 | 2.46 | 3.40 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 259 | 218 | 300 | 20.50 | 41.00 | |
| | mmol/l | 2.94 | 2.47 | 3.41 | 0.24 | 0.47 | L/G Kinase EP. no correction |
| | mg/dl | 260 | 219 | 301 | 20.50 | 41.00 | |
| | mmol/l | 2.83 | 2.38 | 3.28 | 0.23 | 0.45 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 250 | 211 | 289 | 19.50 | 39.00 | |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.17 | 7.98 | 10.4 | 0.60 | 1.19 | |



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## Roche Cobas C111®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.61 | 0.03 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.02 | 7.86 | 10.2 | 0.58 | 1.16 | |
| | mmol/l | 0.54 | 0.47 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.14 | 7.95 | 10.3 | 0.60 | 1.19 | |
| Urea | mmol/l | 19.2 | 16.3 | 22.1 | 1.45 | 2.90 | Urease kinetic |
| | mg/dl | 115 | 98.0 | 132 | 8.50 | 17.00 | |
| | mmol/l | 19.2 | 16.3 | 22.1 | 1.45 | 2.90 | BUN |
| | mg/dl | 53.9 | 45.8 | 62.0 | 4.05 | 8.10 | |



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# Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.8 | 26.2 | 35.4 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.08 | 2.62 | 3.54 | 0.23 | 0.46 | |
| | g/l | 29.2 | 24.8 | 33.6 | 2.20 | 4.40 | Bromocresol Purple |
| | g/dl | 2.92 | 2.48 | 3.36 | 0.22 | 0.44 | |
| | g/l | 27.6 | 23.4 | 31.8 | 2.10 | 4.20 | Turbidimetric Assays |
| | g/dl | 2.76 | 2.34 | 3.18 | 0.21 | 0.42 | |
| Alkaline Phosphatase | U/l | 320 | 272 | 368 | 24.00 | 48.00 | Roche Integra AMP buffer 37°C |
| | U/l | 249 | 212 | 286 | 18.50 | 37.00 | Roche Integra AMP buffer 30°C |
| | U/l | 204 | 174 | 234 | 15.00 | 30.00 | Roche Integra AMP buffer 25°C |
| | U/l | 322 | 274 | 370 | 24.00 | 48.00 | AMP optimised to IFCC 37°C |
| | U/l | 251 | 213 | 289 | 19.00 | 38.00 | AMP optimised to IFCC 30°C |
| | U/l | 206 | 175 | 237 | 15.50 | 31.00 | AMP optimised to IFCC 25°C |
| | U/l | 325 | 276 | 374 | 24.50 | 49.00 | Colorimetric 37°C |
| | U/l | 253 | 215 | 291 | 19.00 | 38.00 | Colorimetric 30°C |
| | U/l | 208 | 176 | 240 | 16.00 | 32.00 | Colorimetric 25°C |
| ALT (GPT) | U/l | 131 | 105 | 157 | 13.00 | 26.00 | Tris buffer without P5P 37°C |
| | U/l | 97 | 78 | 116 | 9.50 | 19.00 | Tris buffer without P5P 30°C |
| | U/l | 74 | 59 | 89 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 233 | 198 | 268 | 17.50 | 35.00 | Roche EPS Liquid 37°C |
| Amylase Total | U/l | 257 | 219 | 295 | 19.00 | 38.00 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 255 | 217 | 293 | 19.00 | 38.00 | Other Roche 2-chloro-pNPG7 37°C |



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## Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Amylase Total | U/l | 259 | 220 | 298 | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C |
| | U/l | 255 | 217 | 293 | 19.00 | 38.00 | BM/Roche Colorimetric pNPG7 37°C |
| AST (GOT) | U/l | 146 | 117 | 175 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 99 | 79 | 119 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 69 | 56 | 82 | 6.50 | 13.00 | Tris buffer without P5P 25°C |
| Bile Acids | µmol/l | 44.6 | 35.7 | 53.5 | 4.45 | 8.90 | Enzymatic Colorimetric |
| Bicarbonate | mmol/l | 16.0 | 12.6 | 19.4 | 1.70 | 3.40 | Colorimetric |
| | mmol/l | 16.1 | 12.7 | 19.5 | 1.70 | 3.40 | Enzymatic |
| Bilirubin Direct | µmol/l | 29.1 | 23.0 | 35.2 | 3.05 | 6.10 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.70 | 1.35 | 2.05 | 0.18 | 0.35 | |
| | 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 | |
| | µmol/l | 29.4 | 23.2 | 35.6 | 3.10 | 6.20 | Roche DPD JG standardised |
| | mg/dl | 1.72 | 1.36 | 2.08 | 0.18 | 0.36 | |
| | µmol/l | 29.5 | 23.3 | 35.7 | 3.10 | 6.20 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.73 | 1.36 | 2.10 | 0.19 | 0.37 | |
| Bilirubin Total | µmol/l | 74.7 | 59.0 | 90.4 | 7.85 | 15.70 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.37 | 3.45 | 5.29 | 0.46 | 0.92 | |
| | µmol/l | 74.0 | 58.5 | 89.5 | 7.75 | 15.50 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.33 | 3.42 | 5.24 | 0.46 | 0.91 | |
| | µmol/l | 74.3 | 58.7 | 89.9 | 7.80 | 15.60 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.35 | 3.43 | 5.27 | 0.46 | 0.92 | |
| | µmol/l | 73.7 | 58.2 | 89.2 | 7.75 | 15.50 | Nitrobenzenediazonium salt |
| | mg/dl | 4.31 | 3.40 | 5.22 | 0.46 | 0.91 | |
| | µmol/l | 74.3 | 58.7 | 89.9 | 7.80 | 15.60 | Diazonium ion |
| | mg/dl | 4.35 | 3.43 | 5.27 | 0.46 | 0.92 | |



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## Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Calcium | mmol/l | 3.12 | 2.80 | 3.44 | 0.16 | 0.32 | Cresolphthalein complexone |
| | mg/dl | 12.5 | 11.2 | 13.8 | 0.65 | 1.30 | |
| | mmol/l | 3.08 | 2.77 | 3.39 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.3 | 11.1 | 13.5 | 0.60 | 1.20 | |
| | mmol/l | 3.12 | 2.81 | 3.43 | 0.16 | 0.31 | NM-BAPTA |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.50 | 6.53 | 8.47 | 0.49 | 0.97 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 290 | 252 | 328 | 19.00 | 38.00 | |
| | mmol/l | 7.48 | 6.51 | 8.45 | 0.49 | 0.97 | Cholesterol Oxidase - IDMS |
| | mg/dl | 289 | 251 | 327 | 19.00 | 38.00 | |
| Chloride | mmol/l | 110 | 104 | 116 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 5084 | 4067 | 6101 | 508.50 | 1017.00 | Colorimetric Benzoylcholine 37°C |
| | U/l | 5058 | 4046 | 6070 | 506.00 | 1012.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 491 | 403 | 579 | 44.00 | 88.00 | CK-NAC serum start (DGKC) 37°C |
| | U/l | 307 | 252 | 362 | 27.50 | 55.00 | CK-NAC serum start (DGKC) 30°C |
| | U/l | 209 | 171 | 247 | 19.00 | 38.00 | CK-NAC serum start (DGKC) 25°C |
| | U/l | 483 | 396 | 570 | 43.50 | 87.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 302 | 248 | 356 | 27.00 | 54.00 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 205 | 168 | 242 | 18.50 | 37.00 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 487 | 399 | 575 | 44.00 | 88.00 | CK-NAC (IFCC) 37°C |
| | U/l | 305 | 250 | 360 | 27.50 | 55.00 | CK-NAC (IFCC) 30°C |
| | U/l | 207 | 170 | 244 | 18.50 | 37.00 | CK-NAC (IFCC) 25°C |
| Copper | µmol/l | 23.6 | 18.9 | 28.3 | 2.35 | 4.70 | Colorimetric |
| | µg/dl | 150 | 120 | 180 | 15.00 | 30.00 | |



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## Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 401 | 321 | 481 | 40.00 | 80.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.53 | 3.63 | 5.43 | 0.45 | 0.90 | |
| | µmol/l | 414 | 331 | 497 | 41.50 | 83.00 | Enzymatic UV method |
| | mg/dl | 4.68 | 3.74 | 5.62 | 0.47 | 0.94 | |
| | µmol/l | 416 | 333 | 499 | 41.50 | 83.00 | Creatinine PAP method |
| | mg/dl | 4.70 | 3.76 | 5.64 | 0.47 | 0.94 | |
| | µmol/l | 412 | 329 | 495 | 41.50 | 83.00 | Roche Creatinine Plus |
| | mg/dl | 4.66 | 3.72 | 5.60 | 0.47 | 0.94 | |
| | µmol/l | 399 | 319 | 479 | 40.00 | 80.00 | Jaffe rate blanked |
| | mg/dl | 4.51 | 3.60 | 5.42 | 0.46 | 0.91 | |
| | µmol/l | 397 | 318 | 476 | 39.50 | 79.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.49 | 3.59 | 5.39 | 0.45 | 0.90 | |
| | µmol/l | 398 | 319 | 477 | 39.50 | 79.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.50 | 3.60 | 5.40 | 0.45 | 0.90 | |
| | µmol/l | 405 | 324 | 486 | 40.50 | 81.00 | IDMS traceable |
| | mg/dl | 4.58 | 3.66 | 5.50 | 0.46 | 0.92 | |
| Free T4 | pmol/l | 78.7 | 59.0 | 98.4 | 9.85 | 19.70 | Roche Cobas e601/602 |
| | ng/dl | 6.14 | 4.60 | 7.68 | 0.77 | 1.54 | |
| | pg/ml | 61.4 | 46.0 | 76.8 | 7.70 | 15.40 | Roche Cobas e601/602 |
| gamma-GT | U/l | 168 | 143 | 193 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 132 | 113 | 151 | 9.50 | 19.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 104 | 88 | 120 | 8.00 | 16.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 182 | 155 | 209 | 13.50 | 27.00 | Gamma glutamyl-4-nitroanilide 37°C |
| | U/l | 143 | 122 | 164 | 10.50 | 21.00 | Gamma glutamyl-4-nitroanilide 30°C |
| | U/l | 112 | 96 | 128 | 8.00 | 16.00 | Gamma glutamyl-4-nitroanilide 25°C |



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## Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 181 | 154 | 208 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 143 | 121 | 165 | 11.00 | 22.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 112 | 95 | 129 | 8.50 | 17.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.4 | 13.1 | 17.7 | 1.15 | 2.30 | Glucose dehydrogenase |
| | mg/dl | 278 | 236 | 320 | 21.00 | 42.00 | |
| | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |
| | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |
| HDL - Cholesterol | mmol/l | 2.72 | 2.31 | 3.13 | 0.21 | 0.41 | Direct HDL Immunoseparation |
| | mg/dl | 105 | 89.2 | 121 | 7.90 | 15.80 | |
| | mmol/l | 2.87 | 2.44 | 3.30 | 0.22 | 0.43 | Direct HDL PEGME |
| | mg/dl | 111 | 94.2 | 128 | 8.40 | 16.80 | |
| | mmol/l | 2.85 | 2.42 | 3.28 | 0.22 | 0.43 | Direct HDL Roche 4th Generation |
| | mg/dl | 110 | 93.4 | 127 | 8.30 | 16.60 | |
| Iron | µmol/l | 38.6 | 31.7 | 45.5 | 3.45 | 6.90 | Colorimetric with ppt. |
| | µg/dl | 216 | 177 | 255 | 19.50 | 39.00 | |
| | µmol/l | 38.9 | 31.9 | 45.9 | 3.50 | 7.00 | Colorimetric without ppt. |
| | µg/dl | 217 | 178 | 256 | 19.50 | 39.00 | |
| Lactate | mmol/l | 5.42 | 4.45 | 6.39 | 0.49 | 0.97 | Colorimetric Lactate Oxidase |
| | mg/dl | 48.8 | 40.1 | 57.5 | 4.35 | 8.70 | |
| LD (LDH) | U/l | 358 | 304 | 412 | 27.00 | 54.00 | L->P 37°C |
| | U/l | 258 | 219 | 297 | 19.50 | 39.00 | L->P 30°C |
| | U/l | 182 | 154 | 210 | 14.00 | 28.00 | L->P 25°C |
| | U/l | 361 | 307 | 415 | 27.00 | 54.00 | L->P IFCC 37°C |
| | U/l | 261 | 222 | 300 | 19.50 | 39.00 | L->P IFCC 30°C |
| | U/l | 183 | 156 | 210 | 13.50 | 27.00 | L->P IFCC 25°C |



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## Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Lipase | U/l | 67 | 54 | 80 | 6.50 | 13.00 | Other Colorimetric 37°C |
| | U/l | 67 | 53 | 81 | 7.00 | 14.00 | Roche Colorimetric 37°C |
| | U/l | 67 | 54 | 80 | 6.50 | 13.00 | Roche Turbidimetric with colipase 37°C |
| Lithium | mmol/l | 2.01 | 1.77 | 2.25 | 0.12 | 0.24 | Ion selective electrode |
| | mg/dl | 1.40 | 1.23 | 1.57 | 0.09 | 0.17 | |
| | mmol/l | 2.03 | 1.78 | 2.28 | 0.13 | 0.25 | Spectrophotometric |
| | mg/dl | 1.41 | 1.24 | 1.58 | 0.09 | 0.17 | |
| Magnesium | mmol/l | 1.90 | 1.67 | 2.13 | 0.12 | 0.23 | Arsenazo III |
| | mg/dl | 4.62 | 4.06 | 5.18 | 0.28 | 0.56 | |
| | mmol/l | 1.90 | 1.67 | 2.13 | 0.12 | 0.23 | Atomic absorption |
| | mg/dl | 4.62 | 4.06 | 5.18 | 0.28 | 0.56 | |
| | mmol/l | 1.93 | 1.70 | 2.16 | 0.12 | 0.23 | Xylidyl Blue |
| | mg/dl | 4.69 | 4.13 | 5.25 | 0.28 | 0.56 | |
| | mmol/l | 1.93 | 1.70 | 2.16 | 0.12 | 0.23 | Chlorphosphonazo III |
| | mg/dl | 4.69 | 4.13 | 5.25 | 0.28 | 0.56 | |
| | mmol/l | 1.92 | 1.69 | 2.15 | 0.12 | 0.23 | Enzymatic |
| | mg/dl | 4.67 | 4.11 | 5.23 | 0.28 | 0.56 | |
| Osmolality | mOsm/kg | 351 | 281 | 421 | 35.00 | 70.00 | Calculated |
| Phosphate Inorganic | mmol/l | 2.18 | 1.86 | 2.50 | 0.16 | 0.32 | Phosphomolybdate enzymatic |
| | mg/dl | 6.76 | 5.77 | 7.75 | 0.50 | 0.99 | |
| | mmol/l | 2.20 | 1.87 | 2.53 | 0.17 | 0.33 | Phosphomolybdate UV |
| | mg/dl | 6.82 | 5.80 | 7.84 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.15 | 5.84 | 6.46 | 0.16 | 0.31 | ISE method - indirect |



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## Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Protein Total | g/l | 44.4 | 35.5 | 53.3 | 4.45 | 8.90 | Biuret reaction end point |
| | g/dl | 4.44 | 3.55 | 5.33 | 0.45 | 0.89 | |
| | g/l | 44.2 | 35.3 | 53.1 | 4.45 | 8.90 | Biuret reaction kinetic |
| | g/dl | 4.42 | 3.53 | 5.31 | 0.45 | 0.89 | |
| PSA Total | ng/ml = | 18.3 | 13.7 | 22.9 | 2.30 | 4.60 | Roche Cobas 6000/8000 |
| Sodium | mmol/l | 159 | 151 | 167 | 4.00 | 8.00 | ISE method - indirect |
| Thyroid Stimulating Hormone | µU/ml = | 1.45 | 1.16 | 1.74 | 0.15 | 0.29 | Roche Cobas e601/602 |
| TIBC | µmol/l | 42.3 | 33.4 | 51.2 | 4.45 | 8.90 | FE+UIBC(saturation with iron) |
| | µg/dl | 236 | 187 | 285 | 24.50 | 49.00 | |
| | µmol/l | 42.8 | 33.8 | 51.8 | 4.50 | 9.00 | Calculated from Transferrin |
| | µg/dl | 239 | 189 | 289 | 25.00 | 50.00 | |
| Total T3 | nmol/l | 3.77 | 2.83 | 4.71 | 0.47 | 0.94 | Roche Cobas e601/602 |
| | ng/ml | 2.45 | 1.84 | 3.06 | 0.31 | 0.61 | |
| | ng/dl | 245 | 184 | 306 | 30.50 | 61.00 | Roche Cobas e601/602 |
| Total T4 | nmol/l | 216 | 162 | 270 | 27.00 | 54.00 | Roche Cobas e601/602 |
| | µg/dl | 16.8 | 12.6 | 21.0 | 2.10 | 4.20 | |
| | ng/ml | 168 | 126 | 210 | 21.00 | 42.00 | Roche Cobas e601/602 |
| Triglycerides | mmol/l | 2.92 | 2.45 | 3.39 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 258 | 217 | 299 | 20.50 | 41.00 | |
| | mmol/l | 2.90 | 2.44 | 3.36 | 0.23 | 0.46 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 257 | 216 | 298 | 20.50 | 41.00 | |
| | mmol/l | 2.93 | 2.46 | 3.40 | 0.24 | 0.47 | L/G Kinase EP. no correction |
| | mg/dl | 259 | 218 | 300 | 20.50 | 41.00 | |
| | mmol/l | 2.93 | 2.46 | 3.40 | 0.24 | 0.47 | L/G kinase EP. 0.11 mmol/l correction |
| | mg/dl | 259 | 218 | 300 | 20.50 | 41.00 | |



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## Roche Cobas c303/501/502/503

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 2.92 | 2.45 | 3.39 | 0.24 | 0.47 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 258 | 217 | 299 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase catalase 340nm |
| | mg/dl | 9.07 | 7.90 | 10.2 | 0.59 | 1.17 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.02 | 7.85 | 10.2 | 0.59 | 1.17 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.04 | 7.86 | 10.2 | 0.59 | 1.18 | |
| | mmol/l | 0.54 | 0.47 | 0.60 | 0.03 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 8.99 | 7.83 | 10.2 | 0.58 | 1.16 | |
| Urea | mmol/l | 20.1 | 17.0 | 23.2 | 1.55 | 3.10 | Urease end point |
| | mg/dl | 121 | 102 | 140 | 9.50 | 19.00 | |
| | mmol/l | 20.1 | 17.1 | 23.1 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 121 | 103 | 139 | 9.00 | 18.00 | |
| | mmol/l | 20.1 | 17.1 | 23.1 | 1.50 | 3.00 | BUN |
| | mg/dl | 56.4 | 47.9 | 64.9 | 4.25 | 8.50 | |



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## Roche Cobas C311®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.5 | 25.9 | 35.1 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.05 | 2.59 | 3.51 | 0.23 | 0.46 | |
| | g/l | 30.0 | 25.5 | 34.5 | 2.25 | 4.50 | Bromocresol Purple |
| | g/dl | 3.00 | 2.55 | 3.45 | 0.23 | 0.45 | |
| Alkaline Phosphatase | U/l | 317 | 269 | 365 | 24.00 | 48.00 | Roche Integra AMP buffer 37°C |
| | U/l | 247 | 210 | 284 | 18.50 | 37.00 | Roche Integra AMP buffer 30°C |
| | U/l | 203 | 172 | 234 | 15.50 | 31.00 | Roche Integra AMP buffer 25°C |
| | U/l | 313 | 266 | 360 | 23.50 | 47.00 | AMP optimised to IFCC 37°C |
| | U/l | 244 | 207 | 281 | 18.50 | 37.00 | AMP optimised to IFCC 30°C |
| | U/l | 200 | 170 | 230 | 15.00 | 30.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 131 | 105 | 157 | 13.00 | 26.00 | Tris buffer without P5P 37°C |
| | U/l | 97 | 78 | 116 | 9.50 | 19.00 | Tris buffer without P5P 30°C |
| | U/l | 74 | 59 | 89 | 7.50 | 15.00 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 235 | 200 | 270 | 17.50 | 35.00 | Roche EPS Liquid 37°C |
| Amylase Total | U/l | 259 | 220 | 298 | 19.50 | 39.00 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 265 | 225 | 305 | 20.00 | 40.00 | Other Roche 2-chloro-pNPG7 37°C |
| | U/l | 263 | 224 | 302 | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C |
| | U/l | 260 | 221 | 299 | 19.50 | 39.00 | BM/Roche Colorimetric pNPG7 37°C |
| AST (GOT) | U/l | 146 | 117 | 175 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| | U/l | 99 | 79 | 119 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 69 | 56 | 82 | 6.50 | 13.00 | Tris buffer without P5P 25°C |



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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bicarbonate | mmol/l | 15.4 | 12.2 | 18.6 | 1.60 | 3.20 | Enzymatic |
| Bilirubin Direct | µmol/l | 27.5 | 21.7 | 33.3 | 2.90 | 5.80 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.61 | 1.27 | 1.95 | 0.17 | 0.34 | |
| | µmol/l | 27.9 | 22.0 | 33.8 | 2.95 | 5.90 | Roche DPD JG standardised |
| | mg/dl | 1.63 | 1.29 | 1.97 | 0.17 | 0.34 | |
| Bilirubin Total | µmol/l | 75.5 | 59.7 | 91.3 | 7.90 | 15.80 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.42 | 3.49 | 5.35 | 0.47 | 0.93 | |
| | µmol/l | 74.6 | 59.0 | 90.2 | 7.80 | 15.60 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.36 | 3.45 | 5.27 | 0.46 | 0.91 | |
| | µmol/l | 74.1 | 58.6 | 89.6 | 7.75 | 15.50 | Diazonium ion |
| | mg/dl | 4.33 | 3.43 | 5.23 | 0.45 | 0.90 | |
| Calcium | mmol/l | 3.13 | 2.81 | 3.45 | 0.16 | 0.32 | Cresolphthalein complexone |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| | mmol/l | 3.14 | 2.82 | 3.46 | 0.16 | 0.32 | Arsenazo III |
| | mg/dl | 12.6 | 11.3 | 13.9 | 0.65 | 1.30 | |
| | mmol/l | 3.12 | 2.81 | 3.43 | 0.16 | 0.31 | NM-BAPTA |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.55 | 6.57 | 8.53 | 0.49 | 0.98 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 291 | 254 | 328 | 18.50 | 37.00 | |
| | mmol/l | 7.57 | 6.59 | 8.55 | 0.49 | 0.98 | Cholesterol Oxidase - IDMS |
| | mg/dl | 292 | 254 | 330 | 19.00 | 38.00 | |
| Chloride | mmol/l | 110 | 104 | 116 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 5133 | 4106 | 6160 | 513.50 | 1027.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 507 | 416 | 598 | 45.50 | 91.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 317 | 260 | 374 | 28.50 | 57.00 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 215 | 177 | 253 | 19.00 | 38.00 | CK-NAC substrate start (DGKC) 25°C |



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**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| CK Total | U/l | 491 | 402 | 580 | 44.50 | 89.00 | CK-NAC (IFCC) 37°C |
| | U/l | 307 | 252 | 362 | 27.50 | 55.00 | CK-NAC (IFCC) 30°C |
| | U/l | 209 | 171 | 247 | 19.00 | 38.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 408 | 326 | 490 | 41.00 | 82.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.61 | 3.68 | 5.54 | 0.47 | 0.93 | |
| | µmol/l | 407 | 326 | 488 | 40.50 | 81.00 | Roche Creatinine Plus |
| | mg/dl | 4.60 | 3.68 | 5.52 | 0.46 | 0.92 | |
| | µmol/l | 406 | 325 | 487 | 40.50 | 81.00 | Jaffe rate blanked |
| | mg/dl | 4.59 | 3.67 | 5.51 | 0.46 | 0.92 | |
| | µmol/l | 404 | 323 | 485 | 40.50 | 81.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.57 | 3.65 | 5.49 | 0.46 | 0.92 | |
| | µmol/l | 405 | 324 | 486 | 40.50 | 81.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.58 | 3.66 | 5.50 | 0.46 | 0.92 | |
| gamma-GT | U/l | 167 | 142 | 192 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 132 | 112 | 152 | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 103 | 88 | 118 | 7.50 | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 181 | 154 | 208 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 143 | 121 | 165 | 11.00 | 22.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 112 | 95 | 129 | 8.50 | 17.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.6 | 13.3 | 17.9 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 281 | 240 | 322 | 20.50 | 41.00 | |
| | mmol/l | 15.5 | 13.2 | 17.8 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 279 | 238 | 320 | 20.50 | 41.00 | |
| HDL - Cholesterol | mmol/l | 2.91 | 2.48 | 3.34 | 0.22 | 0.43 | Direct HDL PPD |
| | mg/dl | 112 | 95.7 | 128 | 8.15 | 16.30 | |



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**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 2.84 | 2.41 | 3.27 | 0.22 | 0.43 | Direct HDL Roche 4th Generation |
| | mg/dl | 110 | 93.0 | 127 | 8.50 | 17.00 | |
| Iron | µmol/l | 38.7 | 31.8 | 45.6 | 3.45 | 6.90 | Colorimetric with ppt. |
| | µg/dl | 216 | 178 | 254 | 19.00 | 38.00 | |
| | µmol/l | 38.5 | 31.5 | 45.5 | 3.50 | 7.00 | Colorimetric without ppt. |
| | µg/dl | 215 | 176 | 254 | 19.50 | 39.00 | |
| Lactate | mmol/l | 5.45 | 4.47 | 6.43 | 0.49 | 0.98 | Colorimetric Lactate Oxidase |
| | mg/dl | 49.1 | 40.3 | 57.9 | 4.40 | 8.80 | |
| LD (LDH) | U/l | 361 | 306 | 416 | 27.50 | 55.00 | L->P 37°C |
| | U/l | 261 | 221 | 301 | 20.00 | 40.00 | L->P 30°C |
| | U/l | 183 | 155 | 211 | 14.00 | 28.00 | L->P 25°C |
| | U/l | 359 | 305 | 413 | 27.00 | 54.00 | L->P IFCC 37°C |
| | U/l | 259 | 220 | 298 | 19.50 | 39.00 | L->P IFCC 30°C |
| | U/l | 182 | 155 | 209 | 13.50 | 27.00 | L->P IFCC 25°C |
| Lipase | U/l | 67 | 54 | 80 | 6.50 | 13.00 | Roche Colorimetric 37°C |
| Magnesium | mmol/l | 1.91 | 1.68 | 2.14 | 0.12 | 0.23 | Atomic absorption |
| | mg/dl | 4.64 | 4.08 | 5.20 | 0.28 | 0.56 | |
| | mmol/l | 1.92 | 1.69 | 2.15 | 0.12 | 0.23 | Xylidyl Blue |
| | mg/dl | 4.67 | 4.11 | 5.23 | 0.28 | 0.56 | |
| | mmol/l | 1.93 | 1.70 | 2.16 | 0.12 | 0.23 | Chlorphosphonazo III |
| | mg/dl | 4.69 | 4.13 | 5.25 | 0.28 | 0.56 | |
| Osmolality | mOsm/kg | 365 | 292 | 438 | 36.50 | 73.00 | Calculated |
| Phosphate Inorganic | mmol/l | 2.23 | 1.89 | 2.57 | 0.17 | 0.34 | Phosphomolybdate enzymatic |
| | mg/dl | 6.91 | 5.86 | 7.96 | 0.53 | 1.05 | |



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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Phosphate Inorganic | mmol/l | 2.21 | 1.88 | 2.54 | 0.17 | 0.33 | Phosphomolybdate UV |
| | mg/dl | 6.85 | 5.83 | 7.87 | 0.51 | 1.02 | |
| Potassium | mmol/l | 6.14 | 5.83 | 6.45 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 44.4 | 35.5 | 53.3 | 4.45 | 8.90 | Biuret reaction end point |
| | g/dl | 4.44 | 3.55 | 5.33 | 0.45 | 0.89 | |
| | g/l | 45.2 | 36.1 | 54.3 | 4.55 | 9.10 | Biuret reaction kinetic |
| | g/dl | 4.52 | 3.61 | 5.43 | 0.46 | 0.91 | |
| Sodium | mmol/l | 159 | 151 | 167 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 42.8 | 33.8 | 51.8 | 4.50 | 9.00 | FE+UIBC(saturation with iron) |
| | µg/dl | 239 | 189 | 289 | 25.00 | 50.00 | |
| | µmol/l | 43.1 | 34.1 | 52.1 | 4.50 | 9.00 | Direct Colorimetric |
| | µg/dl | 241 | 191 | 291 | 25.00 | 50.00 | |
| Triglycerides | mmol/l | 2.93 | 2.46 | 3.40 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 259 | 218 | 300 | 20.50 | 41.00 | |
| | mmol/l | 2.95 | 2.48 | 3.42 | 0.24 | 0.47 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 261 | 219 | 303 | 21.00 | 42.00 | |
| | mmol/l | 2.94 | 2.47 | 3.41 | 0.24 | 0.47 | L/G Kinase EP. no correction |
| | mg/dl | 260 | 219 | 301 | 20.50 | 41.00 | |
| | mmol/l | 2.90 | 2.43 | 3.37 | 0.24 | 0.47 | L/G kinase EP. 0.11 mmol/l correction |
| | mg/dl | 257 | 215 | 299 | 21.00 | 42.00 | |
| | mmol/l | 2.90 | 2.44 | 3.36 | 0.23 | 0.46 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 257 | 216 | 298 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase catalase 340nm |
| | mg/dl | 9.12 | 7.95 | 10.3 | 0.59 | 1.17 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.06 | 7.88 | 10.2 | 0.59 | 1.18 | |



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RANDOX

## Roche Cobas C311®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.11 | 7.91 | 10.3 | 0.60 | 1.20 | |
| | mmol/l | 0.55 | 0.47 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.16 | 7.96 | 10.4 | 0.60 | 1.20 | |
| Urea | mmol/l | 20.4 | 17.4 | 23.4 | 1.50 | 3.00 | Urease end point |
| | mg/dl | 123 | 105 | 141 | 9.00 | 18.00 | |
| | mmol/l | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 121 | 103 | 139 | 9.00 | 18.00 | |
| | mmol/l | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | BUN |
| | mg/dl | 56.7 | 48.2 | 65.2 | 4.25 | 8.50 | |



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RANDOX

# Roche Cobas c701 / c702 / c711

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 30.5 | 25.9 | 35.1 | 2.30 | 4.60 | Bromocresol Green |
| | g/dl | 3.05 | 2.59 | 3.51 | 0.23 | 0.46 | |
| Alkaline Phosphatase | U/l | 309 | 263 | 355 | 23.00 | 46.00 | Roche Integra AMP buffer 37°C |
| | U/l | 241 | 205 | 277 | 18.00 | 36.00 | Roche Integra AMP buffer 30°C |
| | U/l | 197 | 168 | 226 | 14.50 | 29.00 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 132 | 106 | 158 | 13.00 | 26.00 | Tris buffer without P5P 37°C |
| | U/l | 98 | 78 | 118 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 74 | 60 | 88 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 230 | 196 | 264 | 17.00 | 34.00 | Immunoinhibition EPS substrate 37°C |
| | U/l | 236 | 200 | 272 | 18.00 | 36.00 | Roche EPS Liquid 37°C |
| Amylase Total | U/l | 259 | 220 | 298 | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 147 | 117 | 177 | 15.00 | 30.00 | Tris buffer without P5P 37°C |
| | U/l | 99 | 79 | 119 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 70 | 56 | 84 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 16.1 | 12.8 | 19.4 | 1.65 | 3.30 | Enzymatic |
| Bilirubin Direct | µmol/l | 29.7 | 23.5 | 35.9 | 3.10 | 6.20 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.74 | 1.37 | 2.11 | 0.19 | 0.37 | |
| | µmol/l | 30.2 | 23.9 | 36.5 | 3.15 | 6.30 | Roche DPD JG standardised |
| | mg/dl | 1.77 | 1.40 | 2.14 | 0.19 | 0.37 | |
| Bilirubin Total | µmol/l | 73.9 | 58.4 | 89.4 | 7.75 | 15.50 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.32 | 3.42 | 5.22 | 0.45 | 0.90 | |



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## Roche Cobas c701 / c702 / c711

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 74.4 | 58.8 | 90.0 | 7.80 | 15.60 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.35 | 3.44 | 5.26 | 0.46 | 0.91 | |
| | µmol/l | 74.7 | 59.0 | 90.4 | 7.85 | 15.70 | Diazonium ion |
| | mg/dl | 4.37 | 3.45 | 5.29 | 0.46 | 0.92 | |
| Calcium | mmol/l | 3.12 | 2.80 | 3.44 | 0.16 | 0.32 | Cresolphthalein complexone |
| | mg/dl | 12.5 | 11.2 | 13.8 | 0.65 | 1.30 | |
| | mmol/l | 3.09 | 2.78 | 3.40 | 0.16 | 0.31 | NM-BAPTA |
| | mg/dl | 12.4 | 11.1 | 13.7 | 0.65 | 1.30 | |
| Cholesterol | mmol/l | 7.47 | 6.50 | 8.44 | 0.49 | 0.97 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 288 | 251 | 325 | 18.50 | 37.00 | |
| | mmol/l | 7.49 | 6.51 | 8.47 | 0.49 | 0.98 | Cholesterol Oxidase - IDMS |
| | mg/dl | 289 | 251 | 327 | 19.00 | 38.00 | |
| Chloride | mmol/l | 111 | 105 | 117 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 4972 | 3977 | 5967 | 497.50 | 995.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 473 | 388 | 558 | 42.50 | 85.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 296 | 243 | 349 | 26.50 | 53.00 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 201 | 165 | 237 | 18.00 | 36.00 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 481 | 394 | 568 | 43.50 | 87.00 | CK-NAC (IFCC) 37°C |
| | U/l | 301 | 247 | 355 | 27.00 | 54.00 | CK-NAC (IFCC) 30°C |
| | U/l | 204 | 167 | 241 | 18.50 | 37.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 416 | 333 | 499 | 41.50 | 83.00 | Roche Creatinine Plus |
| | mg/dl | 4.70 | 3.76 | 5.64 | 0.47 | 0.94 | |
| | µmol/l | 402 | 322 | 482 | 40.00 | 80.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.54 | 3.64 | 5.44 | 0.45 | 0.90 | |
| | µmol/l | 406 | 325 | 487 | 40.50 | 81.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.59 | 3.67 | 5.51 | 0.46 | 0.92 | |



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## Roche Cobas c701 / c702 / c711

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 402 | 322 | 482 | 40.00 | 80.00 | IDMS traceable |
| | mg/dl | 4.54 | 3.64 | 5.44 | 0.45 | 0.90 | |
| gamma-GT | U/l | 168 | 143 | 193 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 132 | 113 | 151 | 9.50 | 19.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 104 | 88 | 120 | 8.00 | 16.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 179 | 152 | 206 | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 141 | 120 | 162 | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 110 | 94 | 126 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.4 | 13.1 | 17.7 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 278 | 236 | 320 | 21.00 | 42.00 | |
| HDL - Cholesterol | mmol/l | 2.79 | 2.37 | 3.21 | 0.21 | 0.42 | Direct HDL Roche 4th Generation |
| | mg/dl | 108 | 91.5 | 125 | 8.25 | 16.50 | |
| Iron | µmol/l | 37.0 | 30.4 | 43.6 | 3.30 | 6.60 | Colorimetric without ppt. |
| | µg/dl | 207 | 170 | 244 | 18.50 | 37.00 | |
| Lactate | mmol/l | 5.38 | 4.41 | 6.35 | 0.49 | 0.97 | Colorimetric Lactate Oxidase |
| | mg/dl | 48.5 | 39.7 | 57.3 | 4.40 | 8.80 | |
| LD (LDH) | U/l | 358 | 304 | 412 | 27.00 | 54.00 | L->P IFCC 37°C |
| | U/l | 258 | 219 | 297 | 19.50 | 39.00 | L->P IFCC 30°C |
| | U/l | 182 | 154 | 210 | 14.00 | 28.00 | L->P IFCC 25°C |
| Lipase | U/l | 67 | 54 | 80 | 6.50 | 13.00 | Roche Colorimetric 37°C |
| Lithium | mmol/l | 2.01 | 1.77 | 2.25 | 0.12 | 0.24 | Spectrophotometric |
| | mg/dl | 1.40 | 1.23 | 1.57 | 0.09 | 0.17 | |
| Magnesium | mmol/l | 1.94 | 1.70 | 2.18 | 0.12 | 0.24 | Xylidyl Blue |
| | mg/dl | 4.71 | 4.13 | 5.29 | 0.29 | 0.58 | |



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## Roche Cobas c701 / c702 / c711

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 1.94 | 1.71 | 2.17 | 0.12 | 0.23 | Chlorphosphonazo III |
| | mg/dl | 4.71 | 4.16 | 5.26 | 0.28 | 0.55 | |
| Osmolality | mOsm/kg | 343 | 274 | 412 | 34.50 | 69.00 | Calculated |
| Phosphate Inorganic | mmol/l | 2.17 | 1.85 | 2.49 | 0.16 | 0.32 | Phosphomolybdate UV |
| | mg/dl | 6.73 | 5.74 | 7.72 | 0.50 | 0.99 | |
| Potassium | mmol/l | 6.16 | 5.85 | 6.47 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 44.2 | 35.3 | 53.1 | 4.45 | 8.90 | Biuret reaction end point |
| | g/dl | 4.42 | 3.53 | 5.31 | 0.45 | 0.89 | |
| Sodium | mmol/l | 159 | 151 | 167 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 41.6 | 32.9 | 50.3 | 4.35 | 8.70 | FE+UIBC(saturation with iron) |
| | µg/dl | 233 | 184 | 282 | 24.50 | 49.00 | |
| Triglycerides | mmol/l | 2.90 | 2.44 | 3.36 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 257 | 216 | 298 | 20.50 | 41.00 | |
| | mmol/l | 2.90 | 2.44 | 3.36 | 0.23 | 0.46 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 257 | 216 | 298 | 20.50 | 41.00 | |
| | mmol/l | 2.92 | 2.45 | 3.39 | 0.24 | 0.47 | L/G Kinase EP. no correction |
| | mg/dl | 258 | 217 | 299 | 20.50 | 41.00 | |
| | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | L/G kinase EP. 0.11 mmol/l correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.53 | 0.46 | 0.60 | 0.03 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 8.85 | 7.69 | 10.0 | 0.58 | 1.16 | |
| | mmol/l | 0.53 | 0.46 | 0.59 | 0.03 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 8.82 | 7.68 | 9.96 | 0.57 | 1.14 | |
| | mmol/l | 0.53 | 0.46 | 0.59 | 0.03 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 8.84 | 7.69 | 9.99 | 0.58 | 1.15 | |



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RANDOX

## Roche Cobas c701 / c702 / c711

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Urea | mmol/l | 19.9 | 16.9 | 22.9 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 120 | 102 | 138 | 9.00 | 18.00 | |
| | mmol/l | 19.9 | 16.9 | 22.9 | 1.50 | 3.00 | BUN |
| | mg/dl | 55.9 | 47.5 | 64.3 | 4.20 | 8.40 | |



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## RX SERIES®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 29.5 | 25.1 | 33.9 | 2.20 | 4.40 | Bromocresol Green |
| | g/dl | 2.95 | 2.51 | 3.39 | 0.22 | 0.44 | |
| Alkaline Phosphatase | U/l | 528 | 449 | 607 | 39.50 | 79.00 | Diethanolamine buffer DEA 37°C |
| | U/l | 363 | 309 | 417 | 27.00 | 54.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 146 | 117 | 175 | 14.50 | 29.00 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 271 | 230 | 312 | 20.50 | 41.00 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 294 | 250 | 338 | 22.00 | 44.00 | Randox Liquid Ethylidene pNPG7 37°C |
| AST (GOT) | U/l | 155 | 124 | 186 | 15.50 | 31.00 | Tris buffer without P5P 37°C |
| Bile Acids | µmol/l | 42.5 | 34.0 | 51.0 | 4.25 | 8.50 | 5th Generation Colorimetric |
| Bicarbonate | mmol/l | 16.8 | 13.3 | 20.3 | 1.75 | 3.50 | Enzymatic |
| Bilirubin Direct | 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 | |
| | µmol/l | 26.8 | 21.2 | 32.4 | 2.80 | 5.60 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.57 | 1.24 | 1.90 | 0.17 | 0.33 | |
| Bilirubin Total | µmol/l | 80.7 | 63.8 | 97.6 | 8.45 | 16.90 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.72 | 3.73 | 5.71 | 0.50 | 0.99 | |
| | µmol/l | 87.3 | 69.0 | 106 | 9.15 | 18.30 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 5.11 | 4.04 | 6.18 | 0.54 | 1.07 | |
| Calcium | mmol/l | 3.02 | 2.72 | 3.32 | 0.15 | 0.30 | Arsenazo III |
| | mg/dl | 12.1 | 10.9 | 13.3 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 8.07 | 7.02 | 9.12 | 0.53 | 1.05 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 312 | 271 | 353 | 20.50 | 41.00 | |



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## RX SERIES®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Chloride | mmol/l | 109 | 104 | 114 | 2.50 | 5.00 | ISE direct |
| CK Total | U/l | 534 | 438 | 630 | 48.00 | 96.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 562 | 461 | 663 | 50.50 | 101.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 349 | 279 | 419 | 35.00 | 70.00 | Alkaline picrate no deproteinization |
| | mg/dl | 3.94 | 3.15 | 4.73 | 0.40 | 0.79 | |
| | µmol/l | 417 | 334 | 500 | 41.50 | 83.00 | Enzymatic UV method |
| | mg/dl | 4.71 | 3.77 | 5.65 | 0.47 | 0.94 | |
| gamma-GT | U/l | 191 | 162 | 220 | 14.50 | 29.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 15.3 | 13.0 | 17.6 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 276 | 234 | 318 | 21.00 | 42.00 | |
| | mmol/l | 15.5 | 13.2 | 17.8 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 279 | 238 | 320 | 20.50 | 41.00 | |
| Iron | µmol/l | 39.2 | 32.1 | 46.3 | 3.55 | 7.10 | Colorimetric without ppt. |
| | µg/dl | 219 | 179 | 259 | 20.00 | 40.00 | |
| Lactate | mmol/l | 5.51 | 4.52 | 6.50 | 0.50 | 0.99 | Colorimetric Lactate Oxidase |
| | mg/dl | 49.6 | 40.7 | 58.5 | 4.45 | 8.90 | |
| LD (LDH) | U/l | 747 | 635 | 859 | 56.00 | 112.00 | P->L German methods 37°C |
| | U/l | 360 | 306 | 414 | 27.00 | 54.00 | L->P IFCC 37°C |
| Lipase | U/l | 85 | 68 | 102 | 8.50 | 17.00 | Randox Colorimetric 37°C |
| Magnesium | mmol/l | 1.85 | 1.63 | 2.07 | 0.11 | 0.22 | Xylidyl Blue |
| | mg/dl | 4.50 | 3.96 | 5.04 | 0.27 | 0.54 | |
| Phosphate Inorganic | mmol/l | 2.26 | 1.92 | 2.60 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 7.01 | 5.95 | 8.07 | 0.53 | 1.06 | |
| Potassium | mmol/l | 6.29 | 5.98 | 6.60 | 0.16 | 0.31 | Enzymatic |



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## RX SERIES®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Potassium | mmol/l | 5.95 | 5.65 | 6.25 | 0.15 | 0.30 | ISE method - direct |
| Protein Total | g/l | 46.7 | 37.4 | 56.0 | 4.65 | 9.30 | Biuret reaction end point |
| | g/dl | 4.67 | 3.74 | 5.60 | 0.47 | 0.93 | |
| Sodium | mmol/l | 157 | 149 | 165 | 4.00 | 8.00 | Enzymatic |
| | mmol/l | 157 | 149 | 165 | 4.00 | 8.00 | ISE method - direct |
| TIBC | µmol/l | 44.8 | 35.4 | 54.2 | 4.70 | 9.40 | Direct Colorimetric |
| | µg/dl | 250 | 198 | 302 | 26.00 | 52.00 | |
| Triglycerides | mmol/l | 2.93 | 2.46 | 3.40 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 259 | 218 | 300 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.59 | 0.51 | 0.66 | 0.04 | 0.08 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.86 | 8.58 | 11.1 | 0.64 | 1.28 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.21 | 8.01 | 10.4 | 0.60 | 1.20 | |
| Urea | mmol/l | 18.9 | 16.1 | 21.7 | 1.40 | 2.80 | Urease kinetic |
| | mg/dl | 114 | 96.8 | 131 | 8.60 | 17.20 | |
| | mmol/l | 18.9 | 16.1 | 21.7 | 1.40 | 2.80 | BUN |
| | mg/dl | 53.1 | 45.1 | 61.0 | 3.98 | 7.96 | |



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## SIEMENS ADVIA 1200/1650/1800/2400®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 28.5 | 24.2 | 32.8 | 2.15 | 4.30 | Bromocresol Green |
| | g/dl | 2.85 | 2.42 | 3.28 | 0.22 | 0.43 | |
| Alkaline Phosphatase | U/l | 312 | 265 | 359 | 23.50 | 47.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 152 | 122 | 182 | 15.00 | 30.00 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 247 | 210 | 284 | 18.50 | 37.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 271 | 230 | 312 | 20.50 | 41.00 | Siemens - blocked pNPG7 37°C |
| AST (GOT) | U/l | 163 | 130 | 196 | 16.50 | 33.00 | Tris buffer without P5P 37°C |
| Bile Acids | µmol/l | 44.0 | 35.2 | 52.8 | 4.40 | 8.80 | Enzymatic Colorimetric |
| Bicarbonate | mmol/l | 16.9 | 13.4 | 20.4 | 1.75 | 3.50 | Enzymatic |
| Bilirubin Direct | µmol/l | 28.0 | 22.1 | 33.9 | 2.95 | 5.90 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.64 | 1.29 | 1.99 | 0.18 | 0.35 | |
| Bilirubin Total | µmol/l | 87.2 | 68.9 | 106 | 9.15 | 18.30 | Diazo with Sulphanilic Acid |
| | mg/dl | 5.10 | 4.03 | 6.17 | 0.54 | 1.07 | |
| | µmol/l | 91.4 | 72.2 | 111 | 9.60 | 19.20 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 5.35 | 4.22 | 6.48 | 0.57 | 1.13 | |
| Calcium | mmol/l | 3.02 | 2.72 | 3.32 | 0.15 | 0.30 | Arsenazo III |
| | mg/dl | 12.1 | 10.9 | 13.3 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.54 | 6.56 | 8.52 | 0.49 | 0.98 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 291 | 253 | 329 | 19.00 | 38.00 | |
| Chloride | mmol/l | 114 | 108 | 120 | 3.00 | 6.00 | ISE indirect |
| CK Total | U/l | 506 | 415 | 597 | 45.50 | 91.00 | CK-NAC (IFCC) 37°C |



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## SIEMENS ADVIA 1200/1650/1800/2400®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 398 | 318 | 478 | 40.00 | 80.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.50 | 3.59 | 5.41 | 0.46 | 0.91 | |
| | µmol/l | 405 | 324 | 486 | 40.50 | 81.00 | Enzymatic UV method |
| | mg/dl | 4.58 | 3.66 | 5.50 | 0.46 | 0.92 | |
| | µmol/l | 405 | 324 | 486 | 40.50 | 81.00 | Creatinine PAP method |
| | mg/dl | 4.58 | 3.66 | 5.50 | 0.46 | 0.92 | |
| | µmol/l | 397 | 318 | 476 | 39.50 | 79.00 | Jaffe rate blanked |
| | mg/dl | 4.49 | 3.59 | 5.39 | 0.45 | 0.90 | |
| | µmol/l | 398 | 318 | 478 | 40.00 | 80.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.50 | 3.59 | 5.41 | 0.46 | 0.91 | |
| | µmol/l | 401 | 321 | 481 | 40.00 | 80.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.53 | 3.63 | 5.43 | 0.45 | 0.90 | |
| gamma-GT | U/l | 166 | 141 | 191 | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 165 | 140 | 190 | 12.50 | 25.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 15.2 | 12.9 | 17.5 | 1.15 | 2.30 | Hexokinase |
| | mg/dl | 274 | 232 | 316 | 21.00 | 42.00 | |
| | mmol/l | 15.4 | 13.1 | 17.7 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 278 | 236 | 320 | 21.00 | 42.00 | |
| HDL - Cholesterol | mmol/l | 2.34 | 1.99 | 2.69 | 0.18 | 0.35 | Direct HDL Immunoseparation |
| | mg/dl | 90.3 | 76.8 | 104 | 6.75 | 13.50 | |
| | mmol/l | 2.37 | 2.02 | 2.72 | 0.18 | 0.35 | Direct Clearance Method |
| | mg/dl | 91.5 | 78.0 | 105 | 6.75 | 13.50 | |
| Iron | µmol/l | 38.1 | 31.2 | 45.0 | 3.45 | 6.90 | Colorimetric without ppt. |
| | µg/dl | 213 | 174 | 252 | 19.50 | 39.00 | |
| Lactate | mmol/l | 5.30 | 4.34 | 6.26 | 0.48 | 0.96 | Colorimetric Lactate Oxidase |
| | mg/dl | 47.8 | 39.1 | 56.5 | 4.35 | 8.70 | |



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## SIEMENS ADVIA 1200/1650/1800/2400®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| LD (LDH) | U/l | 358 | 305 | 411 | 26.50 | 53.00 | L->P 37°C |
| | U/l | 350 | 298 | 402 | 26.00 | 52.00 | L->P IFCC 37°C |
| Lipase | U/l | 77 | 62 | 92 | 7.50 | 15.00 | Other Colorimetric 37°C |
| Lithium | mmol/l | 1.93 | 1.70 | 2.16 | 0.12 | 0.23 | Spectrophotometric |
| | mg/dl | 1.34 | 1.18 | 1.50 | 0.08 | 0.16 | |
| Magnesium | mmol/l | 1.82 | 1.60 | 2.04 | 0.11 | 0.22 | Xylidyl Blue |
| | mg/dl | 4.42 | 3.89 | 4.95 | 0.27 | 0.53 | |
| Phosphate Inorganic | mmol/l | 2.28 | 1.94 | 2.62 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 7.07 | 6.01 | 8.13 | 0.53 | 1.06 | |
| Potassium | mmol/l | 6.20 | 5.89 | 6.51 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 44.3 | 35.5 | 53.1 | 4.40 | 8.80 | Biuret reaction end point |
| | g/dl | 4.43 | 3.55 | 5.31 | 0.44 | 0.88 | |
| | g/l | 44.7 | 35.7 | 53.7 | 4.50 | 9.00 | Biuret reaction kinetic |
| | g/dl | 4.47 | 3.57 | 5.37 | 0.45 | 0.90 | |
| Sodium | mmol/l | 160 | 152 | 168 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 43.5 | 34.4 | 52.6 | 4.55 | 9.10 | FE+UIBC(saturation with iron) |
| | µg/dl | 243 | 192 | 294 | 25.50 | 51.00 | |
| Triglycerides | mmol/l | 2.96 | 2.49 | 3.43 | 0.24 | 0.47 | Lipase/GPO-PAP no correction |
| | mg/dl | 262 | 220 | 304 | 21.00 | 42.00 | |
| | mmol/l | 2.96 | 2.48 | 3.44 | 0.24 | 0.48 | L/G Kinase EP. no correction |
| | mg/dl | 262 | 219 | 305 | 21.50 | 43.00 | |
| Uric Acid (Urate) | mmol/l | 0.56 | 0.48 | 0.63 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.32 | 8.11 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.26 | 8.06 | 10.5 | 0.60 | 1.20 | |



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## SIEMENS ADVIA 1200/1650/1800/2400®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.26 | 8.05 | 10.5 | 0.61 | 1.21 | |
| Urea | mmol/l | 20.6 | 17.6 | 23.6 | 1.50 | 3.00 | Urease end point |
| | mg/dl | 124 | 106 | 142 | 9.00 | 18.00 | |
| | mmol/l | 20.3 | 17.2 | 23.4 | 1.55 | 3.10 | Urease kinetic |
| | mg/dl | 122 | 103 | 141 | 9.50 | 19.00 | |
| | mmol/l | 20.3 | 17.3 | 23.3 | 1.50 | 3.00 | BUN |
| | mg/dl | 57.0 | 48.5 | 65.5 | 4.25 | 8.50 | |



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## Siemens Atellica Solution

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 28.7 | 24.4 | 33.0 | 2.15 | 4.30 | Bromocresol Green |
| | g/dl | 2.87 | 2.44 | 3.30 | 0.22 | 0.43 | |
| | g/l | 27.7 | 23.5 | 31.9 | 2.10 | 4.20 | Bromocresol Purple |
| | g/dl | 2.77 | 2.35 | 3.19 | 0.21 | 0.42 | |
| Alkaline Phosphatase | U/l | 309 | 263 | 355 | 23.00 | 46.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 154 | 123 | 185 | 15.50 | 31.00 | Tris buffer without P5P 37°C |
| | U/l | 154 | 123 | 185 | 15.50 | 31.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Pancreatic | U/l | 271 | 230 | 312 | 20.50 | 41.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 302 | 256 | 348 | 23.00 | 46.00 | Siemens - blocked pNPG7 37°C |
| AST (GOT) | U/l | 164 | 131 | 197 | 16.50 | 33.00 | Tris buffer without P5P 37°C |
| | U/l | 166 | 133 | 199 | 16.50 | 33.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate | mmol/l | 17.5 | 13.9 | 21.1 | 1.80 | 3.60 | Enzymatic |
| Bilirubin Direct | µmol/l | 29.7 | 23.4 | 36.0 | 3.15 | 6.30 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.74 | 1.37 | 2.11 | 0.19 | 0.37 | |
| Bilirubin Total | µmol/l | 92.3 | 72.9 | 112 | 9.70 | 19.40 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 5.40 | 4.26 | 6.54 | 0.57 | 1.14 | |
| Calcium | mmol/l | 3.13 | 2.82 | 3.44 | 0.16 | 0.31 | Cresolphthalein complexone |
| | mg/dl | 12.5 | 11.3 | 13.7 | 0.60 | 1.20 | |
| | mmol/l | 3.08 | 2.77 | 3.39 | 0.16 | 0.31 | Arsenazo III |
| | mg/dl | 12.3 | 11.1 | 13.5 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.54 | 6.56 | 8.52 | 0.49 | 0.98 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 291 | 253 | 329 | 19.00 | 38.00 | |



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## Siemens Atellica Solution

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Cholesterol | mmol/l | 7.55 | 6.57 | 8.53 | 0.49 | 0.98 | Cholesterol Oxidase - IDMS |
| | mg/dl | 291 | 254 | 328 | 18.50 | 37.00 | |
| Chloride | mmol/l | 114 | 108 | 120 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 6323 | 5058 | 7588 | 632.50 | 1265.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 492 | 404 | 580 | 44.00 | 88.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 394 | 315 | 473 | 39.50 | 79.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.45 | 3.56 | 5.34 | 0.45 | 0.89 | |
| | µmol/l | 408 | 326 | 490 | 41.00 | 82.00 | Enzymatic UV method |
| | mg/dl | 4.61 | 3.68 | 5.54 | 0.47 | 0.93 | |
| | µmol/l | 407 | 326 | 488 | 40.50 | 81.00 | Creatinine PAP method |
| | mg/dl | 4.60 | 3.68 | 5.52 | 0.46 | 0.92 | |
| | µmol/l | 387 | 310 | 464 | 38.50 | 77.00 | Jaffe rate blanked |
| | mg/dl | 4.37 | 3.50 | 5.24 | 0.44 | 0.87 | |
| | µmol/l | 391 | 313 | 469 | 39.00 | 78.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.42 | 3.54 | 5.30 | 0.44 | 0.88 | |
| Free T4 | pmol/l | 74.1 | 55.6 | 92.6 | 9.25 | 18.50 | Siemens Atellica IM |
| | ng/dl | 5.78 | 4.34 | 7.22 | 0.72 | 1.44 | |
| | pg/ml | 57.8 | 43.4 | 72.2 | 7.20 | 14.40 | Siemens Atellica IM |
| gamma-GT | U/l | 163 | 139 | 187 | 12.00 | 24.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 161 | 137 | 185 | 12.00 | 24.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 15.2 | 13.0 | 17.4 | 1.10 | 2.20 | Hexokinase |
| | mg/dl | 274 | 234 | 314 | 20.00 | 40.00 | |
| | mmol/l | 15.1 | 12.8 | 17.4 | 1.15 | 2.30 | Glucose oxidase |
| | mg/dl | 272 | 231 | 313 | 20.50 | 41.00 | |



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## Siemens Atellica Solution

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 2.59 | 2.20 | 2.98 | 0.20 | 0.39 | Direct HDL PPD |
| | mg/dl | 100 | 84.9 | 115 | 7.55 | 15.10 | |
| | mmol/l | 2.68 | 2.28 | 3.08 | 0.20 | 0.40 | Direct HDL Immunoseparation |
| | mg/dl | 103 | 88.0 | 118 | 7.50 | 15.00 | |
| | mmol/l | 2.64 | 2.24 | 3.04 | 0.20 | 0.40 | Direct Clearance Method |
| | mg/dl | 102 | 86.5 | 118 | 7.75 | 15.50 | |
| Iron | µmol/l | 38.2 | 31.3 | 45.1 | 3.45 | 6.90 | Colorimetric with ppt. |
| | µg/dl | 214 | 175 | 253 | 19.50 | 39.00 | |
| | µmol/l | 38.4 | 31.5 | 45.3 | 3.45 | 6.90 | Colorimetric without ppt. |
| | µg/dl | 215 | 176 | 254 | 19.50 | 39.00 | |
| Lactate | mmol/l | 5.42 | 4.45 | 6.39 | 0.49 | 0.97 | Colorimetric Lactate Oxidase |
| | mg/dl | 48.8 | 40.1 | 57.5 | 4.35 | 8.70 | |
| LD (LDH) | U/l | 349 | 296 | 402 | 26.50 | 53.00 | L->P 37°C |
| | U/l | 348 | 296 | 400 | 26.00 | 52.00 | L->P IFCC 37°C |
| Lipase | U/l | 75 | 60 | 90 | 7.50 | 15.00 | Other Colorimetric 37°C |
| Lithium | mmol/l | 1.98 | 1.74 | 2.22 | 0.12 | 0.24 | Spectrophotometric |
| | mg/dl | 1.37 | 1.21 | 1.53 | 0.08 | 0.16 | |
| Magnesium | mmol/l | 1.85 | 1.63 | 2.07 | 0.11 | 0.22 | Xylidyl Blue |
| | mg/dl | 4.50 | 3.96 | 5.04 | 0.27 | 0.54 | |
| | mmol/l | 1.81 | 1.59 | 2.03 | 0.11 | 0.22 | Methylthymol blue |
| | mg/dl | 4.40 | 3.86 | 4.94 | 0.27 | 0.54 | |
| Osmolality | mOsm/kg | 343 | 275 | 411 | 34.00 | 68.00 | Calculated |
| Phosphate Inorganic | mmol/l | 2.27 | 1.93 | 2.61 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 7.04 | 5.98 | 8.10 | 0.53 | 1.06 | |
| Potassium | mmol/l | 6.07 | 5.77 | 6.37 | 0.15 | 0.30 | ISE method - indirect |



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## Siemens Atellica Solution

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Protein Total | g/l | 44.6 | 35.7 | 53.5 | 4.45 | 8.90 | Biuret reaction end point |
| | g/dl | 4.46 | 3.57 | 5.35 | 0.45 | 0.89 | |
| Sodium | mmol/l | 158 | 150 | 166 | 4.00 | 8.00 | ISE method - indirect |
| Thyroid Stimulating Hormone | µU/ml = | 1.17 | 0.94 | 1.40 | 0.12 | 0.23 | Siemens Atellica IM |
| TIBC | µmol/l | 45.7 | 36.1 | 55.3 | 4.80 | 9.60 | FE+UIBC(saturation with iron) |
| | µg/dl | 255 | 202 | 308 | 26.50 | 53.00 | |
| | µmol/l | 45.5 | 35.9 | 55.1 | 4.80 | 9.60 | Direct Colorimetric |
| | µg/dl | 254 | 201 | 307 | 26.50 | 53.00 | |
| Triglycerides | mmol/l | 3.04 | 2.55 | 3.53 | 0.25 | 0.49 | Lipase/GPO-PAP no correction |
| | mg/dl | 269 | 226 | 312 | 21.50 | 43.00 | |
| | mmol/l | 2.98 | 2.50 | 3.46 | 0.24 | 0.48 | L/G Kinase EP. no correction |
| | mg/dl | 264 | 221 | 307 | 21.50 | 43.00 | |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.19 | 8.00 | 10.4 | 0.60 | 1.19 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.27 | 8.06 | 10.5 | 0.61 | 1.21 | |
| | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.19 | 8.00 | 10.4 | 0.60 | 1.19 | |
| Urea | mmol/l | 20.1 | 17.1 | 23.1 | 1.50 | 3.00 | Urease end point |
| | mg/dl | 121 | 103 | 139 | 9.00 | 18.00 | |
| | mmol/l | 19.9 | 16.9 | 22.9 | 1.50 | 3.00 | Urease kinetic |
| | mg/dl | 120 | 102 | 138 | 9.00 | 18.00 | |
| | mmol/l | 19.9 | 16.9 | 22.9 | 1.50 | 3.00 | BUN |
| | mg/dl | 55.9 | 47.5 | 64.3 | 4.20 | 8.40 | |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 27.0 | 23.0 | 31.0 | 2.00 | 4.00 | Bromocresol Green |
| | g/dl | 2.70 | 2.30 | 3.10 | 0.20 | 0.40 | |
| | g/l | 27.2 | 23.2 | 31.2 | 2.00 | 4.00 | Bromocresol Purple |
| | g/dl | 2.72 | 2.32 | 3.12 | 0.20 | 0.40 | |
| Alkaline Phosphatase | U/l | 316 | 268 | 364 | 24.00 | 48.00 | Siemens Dimension AMP buffer 37°C |
| | U/l | 318 | 270 | 366 | 24.00 | 48.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 149 | 119 | 179 | 15.00 | 30.00 | Tris buffer with P5P 37°C |
| | U/l | 150 | 120 | 180 | 15.00 | 30.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total | U/l | 309 | 263 | 355 | 23.00 | 46.00 | Siemens - maltopenta/hexaoside 37°C |
| | U/l | 313 | 266 | 360 | 23.50 | 47.00 | Siemens 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 176 | 141 | 211 | 17.50 | 35.00 | Tris buffer with P5P 37°C |
| | U/l | 182 | 146 | 218 | 18.00 | 36.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate | mmol/l | 18.2 | 14.4 | 22.0 | 1.90 | 3.80 | Enzymatic |
| Bilirubin Direct | µmol/l | 17.8 | 14.1 | 21.5 | 1.85 | 3.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.04 | 0.825 | 1.26 | 0.11 | 0.22 | |
| | µmol/l | 17.7 | 13.9 | 21.5 | 1.90 | 3.80 | Diazo/Sulphanilic Siemens Dimension |
| | mg/dl | 1.04 | 0.813 | 1.27 | 0.11 | 0.23 | |
| Bilirubin Total | µmol/l | 81.0 | 64.0 | 98.0 | 8.50 | 17.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.74 | 3.74 | 5.74 | 0.50 | 1.00 | |
| | µmol/l | 82.6 | 65.3 | 99.9 | 8.65 | 17.30 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 4.83 | 3.82 | 5.84 | 0.51 | 1.01 | |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Calcium | mmol/l | 3.04 | 2.74 | 3.34 | 0.15 | 0.30 | Cresolphthalein complexone |
| | mg/dl | 12.2 | 11.0 | 13.4 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.14 | 6.21 | 8.07 | 0.47 | 0.93 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 276 | 240 | 312 | 18.00 | 36.00 | |
| | mmol/l | 7.22 | 6.28 | 8.16 | 0.47 | 0.94 | Dimension-Siemens reagents |
| | mg/dl | 279 | 242 | 316 | 18.50 | 37.00 | |
| Chloride | mmol/l | 113 | 107 | 119 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 8880 | 7104 | 10656 | 888.00 | 1776.00 | Colorimetric - Butyrythiochol. Dimension 37°C |
| CK Total | U/l | 485 | 398 | 572 | 43.50 | 87.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 401 | 321 | 481 | 40.00 | 80.00 | Alkaline picrate with deproteinization |
| | mg/dl | 4.53 | 3.63 | 5.43 | 0.45 | 0.90 | |
| | µmol/l | 411 | 329 | 493 | 41.00 | 82.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.64 | 3.72 | 5.56 | 0.46 | 0.92 | |
| | µmol/l | 412 | 330 | 494 | 41.00 | 82.00 | Enzymatic UV method |
| | mg/dl | 4.66 | 3.73 | 5.59 | 0.47 | 0.93 | |
| | µmol/l | 408 | 326 | 490 | 41.00 | 82.00 | Creatinine PAP method |
| | mg/dl | 4.61 | 3.68 | 5.54 | 0.47 | 0.93 | |
| | µmol/l | 410 | 328 | 492 | 41.00 | 82.00 | Jaffe rate blanked |
| | mg/dl | 4.63 | 3.71 | 5.55 | 0.46 | 0.92 | |
| | µmol/l | 406 | 325 | 487 | 40.50 | 81.00 | IDMS traceable |
| | mg/dl | 4.59 | 3.67 | 5.51 | 0.46 | 0.92 | |
| Free T4 | pmol/l | 87.9 | 65.9 | 110 | 11.00 | 22.00 | Siemens Dimension ExI LOCI |
| | ng/dl | 6.86 | 5.14 | 8.58 | 0.86 | 1.72 | |
| | pg/ml | 68.6 | 51.4 | 85.8 | 8.60 | 17.20 | Siemens Dimension ExI LOCI |
| gamma-GT | U/l | 186 | 158 | 214 | 14.00 | 28.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 212 | 180 | 244 | 16.00 | 32.00 | Siemens Dimension (non IFCC) 37°C |
| Glucose | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |
| | mmol/l | 15.0 | 12.7 | 17.3 | 1.15 | 2.30 | Oxygen electrode |
| | mg/dl | 270 | 229 | 311 | 20.50 | 41.00 | |
| HDL - Cholesterol | mmol/l | 2.71 | 2.31 | 3.11 | 0.20 | 0.40 | Direct HDL PPD |
| | mg/dl | 105 | 89.2 | 121 | 7.90 | 15.80 | |
| | mmol/l | 2.68 | 2.28 | 3.08 | 0.20 | 0.40 | Direct HDL PEGME |
| | mg/dl | 103 | 88.0 | 118 | 7.50 | 15.00 | |
| Iron | µmol/l | 36.6 | 30.0 | 43.2 | 3.30 | 6.60 | Colorimetric with ppt. |
| | µg/dl | 205 | 168 | 242 | 18.50 | 37.00 | |
| | µmol/l | 36.2 | 29.7 | 42.7 | 3.25 | 6.50 | Colorimetric without ppt. |
| | µg/dl | 202 | 166 | 238 | 18.00 | 36.00 | |
| Lactate | mmol/l | 5.16 | 4.23 | 6.09 | 0.47 | 0.93 | UV LDH |
| | mg/dl | 46.5 | 38.1 | 54.9 | 4.20 | 8.40 | |
| LD (LDH) | U/l | 339 | 289 | 389 | 25.00 | 50.00 | Siemens Dimension L-P Non IFCC 37°C |
| | U/l | 346 | 294 | 398 | 26.00 | 52.00 | L->P IFCC 37°C |
| Lipase | U/l | 64 | 51 | 77 | 6.50 | 13.00 | Siemens Dimension Colorimetric (LIP Kit) 37°C |
| Magnesium | mmol/l | 1.94 | 1.71 | 2.17 | 0.12 | 0.23 | Xylidyl Blue |
| | mg/dl | 4.71 | 4.16 | 5.26 | 0.28 | 0.55 | |
| | mmol/l | 1.93 | 1.70 | 2.16 | 0.12 | 0.23 | Methylthymol blue |
| | mg/dl | 4.69 | 4.13 | 5.25 | 0.28 | 0.56 | |
| Osmolality | mOsm/kg | 341 | 273 | 409 | 34.00 | 68.00 | Calculated |
| Phosphate Inorganic | mmol/l | 2.29 | 1.94 | 2.64 | 0.18 | 0.35 | Phosphomolybdate enzymatic |
| | mg/dl | 7.10 | 6.01 | 8.19 | 0.55 | 1.09 | |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Phosphate Inorganic | mmol/l | 2.29 | 1.94 | 2.64 | 0.18 | 0.35 | Phosphomolybdate UV |
| | mg/dl | 7.10 | 6.01 | 8.19 | 0.55 | 1.09 | |
| Potassium | mmol/l | 6.14 | 5.83 | 6.45 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 46.2 | 37.0 | 55.4 | 4.60 | 9.20 | Biuret reaction end point |
| | g/dl | 4.62 | 3.70 | 5.54 | 0.46 | 0.92 | |
| PSA Total | ng/ml = | 17.5 | 13.1 | 21.9 | 2.20 | 4.40 | Siemens Dimension |
| Sodium | mmol/l | 159 | 151 | 167 | 4.00 | 8.00 | ISE method - indirect |
| Thyroid Stimulating Hormone | µU/ml = | 1.14 | 0.91 | 1.37 | 0.12 | 0.23 | Siemens Dimension ExI LOCI |
| TIBC | µmol/l | 37.1 | 29.3 | 44.9 | 3.90 | 7.80 | Removal of excess free iron |
| | µg/dl | 207 | 164 | 250 | 21.50 | 43.00 | |
| | µmol/l | 37.5 | 29.7 | 45.3 | 3.90 | 7.80 | FE+UIBC(saturation with iron) |
| | µg/dl | 210 | 166 | 254 | 22.00 | 44.00 | |
| | µmol/l | 37.4 | 29.6 | 45.2 | 3.90 | 7.80 | Direct Colorimetric |
| | µg/dl | 209 | 165 | 253 | 22.00 | 44.00 | |
| Triglycerides | mmol/l | 2.88 | 2.42 | 3.34 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 255 | 214 | 296 | 20.50 | 41.00 | |
| | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | L/G Kinase EP. no correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |
| | mmol/l | 2.86 | 2.40 | 3.32 | 0.23 | 0.46 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 253 | 212 | 294 | 20.50 | 41.00 | |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.62 | 0.04 | 0.07 | Uricase catalase 340nm |
| | mg/dl | 9.14 | 7.95 | 10.3 | 0.60 | 1.19 | |
| | mmol/l | 0.56 | 0.49 | 0.63 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.37 | 8.16 | 10.6 | 0.61 | 1.21 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.14 | 7.96 | 10.3 | 0.59 | 1.18 | |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.47 | 0.62 | 0.04 | 0.07 | Spectrophotometric at 280-290 |
| | mg/dl | 9.16 | 7.96 | 10.4 | 0.60 | 1.20 | |
| Urea | mmol/l | 20.8 | 17.7 | 23.9 | 1.55 | 3.10 | Urease end point |
| | mg/dl | 125 | 106 | 144 | 9.50 | 19.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | Urease kinetic |
| | mg/dl | 124 | 105 | 143 | 9.50 | 19.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | BUN |
| | mg/dl | 57.8 | 49.1 | 66.5 | 4.35 | 8.70 | |



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## SIEMENS DIMENSION RxL/Max/Xpand®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 27.3 | 23.2 | 31.4 | 2.05 | 4.10 | Bromocresol Green |
| | g/dl | 2.73 | 2.32 | 3.14 | 0.21 | 0.41 | |
| | g/l | 27.1 | 23.0 | 31.2 | 2.05 | 4.10 | Bromocresol Purple |
| | g/dl | 2.71 | 2.30 | 3.12 | 0.21 | 0.41 | |
| Alkaline Phosphatase | U/l | 315 | 268 | 362 | 23.50 | 47.00 | Siemens Dimension AMP buffer 37°C |
| | U/l | 316 | 268 | 364 | 24.00 | 48.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 151 | 121 | 181 | 15.00 | 30.00 | Tris buffer with P5P 37°C |
| | U/l | 150 | 120 | 180 | 15.00 | 30.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Pancreatic | U/l | 244 | 207 | 281 | 18.50 | 37.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 315 | 268 | 362 | 23.50 | 47.00 | Siemens 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 183 | 147 | 219 | 18.00 | 36.00 | Tris buffer with P5P 37°C |
| | U/l | 180 | 144 | 216 | 18.00 | 36.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate | mmol/l | 17.1 | 13.6 | 20.6 | 1.75 | 3.50 | Enzymatic |
| Bilirubin Direct | µmol/l | 17.7 | 13.9 | 21.5 | 1.90 | 3.80 | Diazo/Sulphanilic Siemens Dimension |
| | mg/dl | 1.04 | 0.813 | 1.27 | 0.11 | 0.23 | |
| Bilirubin Total | µmol/l | 81.0 | 64.0 | 98.0 | 8.50 | 17.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.74 | 3.74 | 5.74 | 0.50 | 1.00 | |
| Calcium | mmol/l | 3.06 | 2.76 | 3.36 | 0.15 | 0.30 | Cresolphthalein complexone |
| | mg/dl | 12.3 | 11.1 | 13.5 | 0.60 | 1.20 | |
| Cholesterol | mmol/l | 7.14 | 6.21 | 8.07 | 0.47 | 0.93 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 276 | 240 | 312 | 18.00 | 36.00 | |



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## SIEMENS DIMENSION RxL/Max/Xpand®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Cholesterol | mmol/l | 7.17 | 6.23 | 8.11 | 0.47 | 0.94 | Dimension-Siemens reagents |
| | mg/dl | 277 | 240 | 314 | 18.50 | 37.00 | |
| Chloride | mmol/l | 113 | 107 | 119 | 3.00 | 6.00 | ISE indirect |
| Cholinesterase | U/l | 9058 | 7247 | 10870 | 905.50 | 1811.00 | Colorimetric - Butyrythiochol. Dimension 37°C |
| CK Total | U/l | 484 | 397 | 571 | 43.50 | 87.00 | CK-NAC (IFCC) 37°C |
| | U/l | 477 | 391 | 563 | 43.00 | 86.00 | Dithioerythritol (DTE) IFCC correlated 37°C |
| Creatinine | µmol/l | 409 | 328 | 490 | 40.50 | 81.00 | Alkaline picrate no deproteinization |
| | mg/dl | 4.62 | 3.71 | 5.53 | 0.46 | 0.91 | |
| | µmol/l | 405 | 324 | 486 | 40.50 | 81.00 | Creatinine PAP method |
| | mg/dl | 4.58 | 3.66 | 5.50 | 0.46 | 0.92 | |
| | µmol/l | 408 | 327 | 489 | 40.50 | 81.00 | Jaffe rate blanked |
| | mg/dl | 4.61 | 3.70 | 5.52 | 0.46 | 0.91 | |
| | µmol/l | 406 | 325 | 487 | 40.50 | 81.00 | IDMS traceable |
| | mg/dl | 4.59 | 3.67 | 5.51 | 0.46 | 0.92 | |
| gamma-GT | U/l | 191 | 163 | 219 | 14.00 | 28.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 203 | 173 | 233 | 15.00 | 30.00 | Siemens Dimension (non IFCC) 37°C |
| Glucose | mmol/l | 15.5 | 13.2 | 17.8 | 1.15 | 2.30 | Glucose dehydrogenase |
| | mg/dl | 279 | 238 | 320 | 20.50 | 41.00 | |
| | mmol/l | 15.6 | 13.2 | 18.0 | 1.20 | 2.40 | Hexokinase |
| | mg/dl | 281 | 238 | 324 | 21.50 | 43.00 | |
| HDL - Cholesterol | mmol/l | 2.75 | 2.34 | 3.16 | 0.21 | 0.41 | Direct HDL PPD |
| | mg/dl | 106 | 90.3 | 122 | 7.85 | 15.70 | |
| | mmol/l | 2.71 | 2.30 | 3.12 | 0.21 | 0.41 | Direct HDL PEGME |
| | mg/dl | 105 | 88.8 | 121 | 8.10 | 16.20 | |
| Iron | µmol/l | 36.6 | 30.0 | 43.2 | 3.30 | 6.60 | Colorimetric with ppt. |
| | µg/dl | 205 | 168 | 242 | 18.50 | 37.00 | |



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## SIEMENS DIMENSION RxL/Max/Xpand®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Iron | µmol/l | 36.6 | 30.0 | 43.2 | 3.30 | 6.60 | Colorimetric without ppt. |
| | µg/dl | 205 | 168 | 242 | 18.50 | 37.00 | |
| Lactate | mmol/l | 5.05 | 4.14 | 5.96 | 0.46 | 0.91 | UV LDH |
| | mg/dl | 45.5 | 37.3 | 53.7 | 4.10 | 8.20 | |
| LD (LDH) | U/l | 349 | 296 | 402 | 26.50 | 53.00 | Siemens Dimension L-P Non IFCC 37°C |
| | U/l | 348 | 296 | 400 | 26.00 | 52.00 | L->P IFCC 37°C |
| Lithium | mmol/l | 2.30 | 2.02 | 2.58 | 0.14 | 0.28 | Spectrophotometric |
| | mg/dl | 1.60 | 1.40 | 1.80 | 0.10 | 0.20 | |
| Magnesium | mmol/l | 1.93 | 1.70 | 2.16 | 0.12 | 0.23 | Methylthymol blue |
| | mg/dl | 4.69 | 4.13 | 5.25 | 0.28 | 0.56 | |
| Phosphate Inorganic | mmol/l | 2.29 | 1.95 | 2.63 | 0.17 | 0.34 | Phosphomolybdate enzymatic |
| | mg/dl | 7.10 | 6.05 | 8.15 | 0.53 | 1.05 | |
| | mmol/l | 2.28 | 1.94 | 2.62 | 0.17 | 0.34 | Phosphomolybdate UV |
| | mg/dl | 7.07 | 6.01 | 8.13 | 0.53 | 1.06 | |
| Potassium | mmol/l | 6.07 | 5.76 | 6.38 | 0.16 | 0.31 | ISE method - indirect |
| Protein Total | g/l | 46.1 | 36.8 | 55.4 | 4.65 | 9.30 | Biuret reaction end point |
| | g/dl | 4.61 | 3.68 | 5.54 | 0.47 | 0.93 | |
| Sodium | mmol/l | 158 | 150 | 166 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 37.4 | 29.5 | 45.3 | 3.95 | 7.90 | Removal of excess free iron |
| | µg/dl | 209 | 165 | 253 | 22.00 | 44.00 | |
| | µmol/l | 37.9 | 30.0 | 45.8 | 3.95 | 7.90 | FE+UIBC(saturation with iron) |
| | µg/dl | 212 | 168 | 256 | 22.00 | 44.00 | |
| | µmol/l | 37.2 | 29.4 | 45.0 | 3.90 | 7.80 | Direct Colorimetric |
| | µg/dl | 208 | 164 | 252 | 22.00 | 44.00 | |



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## SIEMENS DIMENSION RxL/Max/Xpand®

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 2.86 | 2.40 | 3.32 | 0.23 | 0.46 | Lipase/GPO-PAP no correction |
| | mg/dl | 253 | 212 | 294 | 20.50 | 41.00 | |
| | mmol/l | 2.87 | 2.41 | 3.33 | 0.23 | 0.46 | L/G Kinase EP. no correction |
| | mg/dl | 254 | 213 | 295 | 20.50 | 41.00 | |
| | mmol/l | 2.84 | 2.39 | 3.29 | 0.23 | 0.45 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 251 | 212 | 290 | 19.50 | 39.00 | |
| Uric Acid (Urate) | mmol/l | 0.55 | 0.48 | 0.62 | 0.04 | 0.07 | Uricase catalase 340nm |
| | mg/dl | 9.22 | 8.03 | 10.4 | 0.60 | 1.19 | |
| | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.02 | 7.85 | 10.2 | 0.59 | 1.17 | |
| | mmol/l | 0.55 | 0.47 | 0.62 | 0.04 | 0.07 | Spectrophotometric at 280-290 |
| | mg/dl | 9.16 | 7.96 | 10.4 | 0.60 | 1.20 | |
| Urea | mmol/l | 20.7 | 17.6 | 23.8 | 1.55 | 3.10 | Urease end point |
| | mg/dl | 124 | 106 | 142 | 9.00 | 18.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | Urease kinetic |
| | mg/dl | 124 | 105 | 143 | 9.50 | 19.00 | |
| | mmol/l | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | BUN |
| | mg/dl | 57.8 | 49.1 | 66.5 | 4.35 | 8.70 | |



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## URIT 8000 Series

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 29.1 | 24.7 | 33.5 | 2.20 | 4.40 | Bromocresol Green |
| | g/dl | 2.91 | 2.47 | 3.35 | 0.22 | 0.44 | |
| ALT (GPT) | U/l | 140 | 112 | 168 | 14.00 | 28.00 | Tris buffer without P5P 37°C |
| | U/l | 104 | 83 | 125 | 10.50 | 21.00 | Tris buffer without P5P 30°C |
| | U/l | 79 | 63 | 95 | 8.00 | 16.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 151 | 121 | 181 | 15.00 | 30.00 | Tris buffer without P5P 37°C |
| | U/l | 102 | 82 | 122 | 10.00 | 20.00 | Tris buffer without P5P 30°C |
| | U/l | 72 | 58 | 86 | 7.00 | 14.00 | Tris buffer without P5P 25°C |
| Cholesterol | mmol/l | 7.45 | 6.49 | 8.41 | 0.48 | 0.96 | Cholesterol Oxidase - Abell Kendall |
| | mg/dl | 288 | 251 | 325 | 18.50 | 37.00 | |
| gamma-GT | U/l | 170 | 145 | 195 | 12.50 | 25.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 134 | 114 | 154 | 10.00 | 20.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 105 | 89 | 121 | 8.00 | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 16.0 | 13.6 | 18.4 | 1.20 | 2.40 | Glucose oxidase |
| | mg/dl | 288 | 245 | 331 | 21.50 | 43.00 | |
| HDL - Cholesterol | mmol/l | 2.36 | 2.00 | 2.72 | 0.18 | 0.36 | Direct Clearance Method |
| | mg/dl | 91.1 | 77.2 | 105 | 6.95 | 13.90 | |
| Phosphate Inorganic | mmol/l | 2.46 | 2.09 | 2.83 | 0.19 | 0.37 | Phosphomolybdate UV |
| | mg/dl | 7.63 | 6.48 | 8.78 | 0.58 | 1.15 | |
| Protein Total | g/l | 47.8 | 38.2 | 57.4 | 4.80 | 9.60 | Biuret reaction end point |
| | g/dl | 4.78 | 3.82 | 5.74 | 0.48 | 0.96 | |



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## URIT 8000 Series

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

**Lot. No. 1309UE Cat. No. HE1532 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2026-10-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 2.85 | 2.40 | 3.30 | 0.23 | 0.45 | Lipase/GPO-PAP no correction |
| | mg/dl | 252 | 212 | 292 | 20.00 | 40.00 | |
| Uric Acid (Urate) | mmol/l | 0.54 | 0.47 | 0.61 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.07 | 7.90 | 10.2 | 0.59 | 1.17 | |
| Urea | mmol/l | 19.2 | 16.4 | 22.0 | 1.40 | 2.80 | Urease kinetic |
| | mg/dl | 115 | 98.6 | 131 | 8.20 | 16.40 | |
| | mmol/l | 19.2 | 16.3 | 22.1 | 1.45 | 2.90 | BUN |
| | mg/dl | 53.9 | 45.8 | 62.0 | 4.05 | 8.10 | |



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