

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

|                        |                             |                       |
|------------------------|-----------------------------|-----------------------|
| <b>CAT. NO.</b> HE1532 | <b>GTIN:</b> 05055273203608 | <b>SIZE:</b> 20 x 5ml |
| <b>CAT. NO.</b> HS2611 | <b>GTIN:</b> 05055273203813 | <b>SIZE:</b> 5 x 5ml  |
| <b>LOT NO.</b> 1247UE  | <b>EXPIRY:</b> 2026-01-28   |                       |

**INTENDED USE**

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

**DEVICE DESCRIPTION**

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

**SAFETY PRECAUTIONS AND WARNINGS**

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

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

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

Health and Safety Data Sheets are available on request.

**STORAGE AND STABILITY**

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

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

**LIMITATIONS**

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

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

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

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  $\pm 2S.D.$

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

**NOTES**

® All trademarks recognised.

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

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| EC | REP | Randox Teoranta, Meenmore,<br>Dungloe, Donegal,<br>F94 TV06, Ireland |
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## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### 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  |                                      |
|                      | g/l  | 28.0   | 23.8 | 32.2 | 2.10  | 4.20  | Bromocresol Purple                   |
|                      | g/dl | 2.80   | 2.38 | 3.22 | 0.21  | 0.42  |                                      |
|                      | g/l  | 29.1   | 24.8 | 33.4 | 2.15  | 4.30  | Ortho Vitros Microslide Systems      |
|                      | g/dl | 2.91   | 2.48 | 3.34 | 0.22  | 0.43  |                                      |
|                      | g/l  | 27.4   | 23.3 | 31.5 | 2.05  | 4.10  | Turbidimetric Assays                 |
|                      | g/dl | 2.74   | 2.33 | 3.15 | 0.21  | 0.41  |                                      |
| Alkaline Phosphatase | U/l  | 273    | 232  | 314  | 20.50 | 41.00 | Ortho Vitros Microslide Systems 37°C |
|                      | U/l  | 512    | 435  | 589  | 38.50 | 77.00 | Diethanolamine buffer DEA 37°C       |
|                      | U/l  | 399    | 339  | 459  | 30.00 | 60.00 | Diethanolamine buffer DEA 30°C       |
|                      | U/l  | 327    | 278  | 376  | 24.50 | 49.00 | Diethanolamine buffer DEA 25°C       |
|                      | U/l  | 346    | 294  | 398  | 26.00 | 52.00 | AMP optimised to IFCC 37°C           |
|                      | U/l  | 270    | 229  | 311  | 20.50 | 41.00 | AMP optimised to IFCC 30°C           |
|                      | U/l  | 221    | 188  | 254  | 16.50 | 33.00 | AMP optimised to IFCC 25°C           |
|                      | U/l  | 332    | 282  | 382  | 25.00 | 50.00 | AMP non-optimised 37°C               |
|                      | U/l  | 259    | 220  | 298  | 19.50 | 39.00 | AMP non-optimised 30°C               |
|                      | U/l  | 212    | 180  | 244  | 16.00 | 32.00 | AMP non-optimised 25°C               |
|                      | U/l  | 323    | 275  | 371  | 24.00 | 48.00 | Colorimetric 37°C                    |
|                      | U/l  | 252    | 214  | 290  | 19.00 | 38.00 | Colorimetric 30°C                    |
|                      | U/l  | 206    | 176  | 236  | 15.00 | 30.00 | Colorimetric 25°C                    |

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Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte            | unit | Target | low | high | 1SD   | 2SD   | methods                              |
|--------------------|------|--------|-----|------|-------|-------|--------------------------------------|
| ALT (GPT)          | U/l  | 135    | 108 | 162  | 13.50 | 27.00 | Colorimetric 37°C                    |
|                    | U/l  | 100    | 80  | 120  | 10.00 | 20.00 | Colorimetric 30°C                    |
|                    | U/l  | 76     | 61  | 91   | 7.50  | 15.00 | Colorimetric 25°C                    |
|                    | U/l  | 138    | 111 | 165  | 13.50 | 27.00 | Ortho Vitros Microslide Systems 37°C |
|                    | U/l  | 148    | 118 | 178  | 15.00 | 30.00 | Tris buffer with P5P 37°C            |
|                    | U/l  | 110    | 87  | 133  | 11.50 | 23.00 | Tris buffer with P5P 30°C            |
|                    | U/l  | 83     | 66  | 100  | 8.50  | 17.00 | Tris buffer with P5P 25°C            |
|                    | U/l  | 138    | 110 | 166  | 14.00 | 28.00 | Tris buffer without P5P 37°C         |
|                    | U/l  | 102    | 81  | 123  | 10.50 | 21.00 | Tris buffer without P5P 30°C         |
|                    | U/l  | 78     | 62  | 94   | 8.00  | 16.00 | Tris buffer without P5P 25°C         |
|                    | U/l  | 156    | 125 | 187  | 15.50 | 31.00 | Tris buffer with P5P NVKC 37°C       |
|                    | U/l  | 115    | 93  | 137  | 11.00 | 22.00 | Tris buffer with P5P NVKC 30°C       |
|                    | U/l  | 88     | 70  | 106  | 9.00  | 18.00 | Tris buffer with P5P NVKC 25°C       |
|                    | U/l  | 135    | 108 | 162  | 13.50 | 27.00 | Ortho Vitros MicroSlide visible 37°C |
| Amylase Pancreatic | U/l  | 234    | 199 | 269  | 17.50 | 35.00 | Immunoinhibition EPS substrate 37°C  |
|                    | U/l  | 237    | 201 | 273  | 18.00 | 36.00 | Roche EPS Liquid 37°C                |
|                    | U/l  | 268    | 228 | 308  | 20.00 | 40.00 | Randox Liquid Ethylidene pNPG7 37°C  |
| Amylase Total      | U/l  | 275    | 234 | 316  | 20.50 | 41.00 | Siemens - blocked pNPG7 37°C         |
|                    | U/l  | 221    | 188 | 254  | 16.50 | 33.00 | Randox Lyo. Ethylidene pNPG7 37°C    |
|                    | U/l  | 296    | 252 | 340  | 22.00 | 44.00 | Randox Liquid Ethylidene pNPG7 37°C  |
|                    | U/l  | 264    | 224 | 304  | 20.00 | 40.00 | BM/Roche Colorimetric pNPG7 37°C     |
|                    | U/l  | 261    | 222 | 300  | 19.50 | 39.00 | Roche Integra 2-chloro-pNPG7 37°C    |
|                    | U/l  | 172    | 146 | 198  | 13.00 | 26.00 | Ortho Vitros Microslide Systems 37°C |
|                    | U/l  | 255    | 217 | 293  | 19.00 | 38.00 | Other Roche 2-chloro-pNPG7 37°C      |
|                    | U/l  | 259    | 220 | 298  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C       |

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte                  | unit   | Target | low  | high | 1SD   | 2SD   | methods                                     |
|--------------------------|--------|--------|------|------|-------|-------|---|
| Amylase Total            | U/l    | 316    | 269  | 363  | 23.50 | 47.00 | Siemens 2-chloro-pNPG3 37°C                 |
|                          | U/l    | 275    | 233  | 317  | 21.00 | 42.00 | Beckman Coulter - blocked pNPG7 37°C        |
|                          | U/l    | 271    | 231  | 311  | 20.00 | 40.00 | Beckman Synchron AMY7 37°C                  |
|                          | U/l    | 293    | 249  | 337  | 22.00 | 44.00 | Abbott Architect Non-IFCC Cal. 37°C         |
|                          | U/l    | 334    | 284  | 384  | 25.00 | 50.00 | Abbott Architect IFCC Cal. 37°C             |
|                          | U/l    | 259    | 220  | 298  | 19.50 | 39.00 | Beckman CNPG3 (Extinction Coeff) 37°C       |
| Apolipoprotein A-1       | g/l    | 1.15   | 0.94 | 1.36 | 0.10  | 0.21  | Immunoturbidimetric                         |
|                          | mg/dl  | 115    | 94.3 | 136  | 10.35 | 20.70 |   |
| Apolipoprotein B         | g/l    | 0.64   | 0.52 | 0.75 | 0.06  | 0.12  | Immunoturbidimetric                         |
|                          | mg/dl  | 63.8   | 52.3 | 75.3 | 5.75  | 11.50 |   |
| Acid Phosphatase (Total) | U/l    | 50.0   | 33.5 | 66.5 | 8.25  | 16.50 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| AST (GOT)                | U/l    | 180    | 144  | 216  | 18.00 | 36.00 | Ortho Vitros Microslide visible slide 37°C  |
|                          | U/l    | 182    | 145  | 219  | 18.50 | 37.00 | Tris buffer with P5P 37°C                   |
|                          | U/l    | 123    | 98   | 148  | 12.50 | 25.00 | Tris buffer with P5P 30°C                   |
|                          | U/l    | 87     | 69   | 105  | 9.00  | 18.00 | Tris buffer with P5P 25°C                   |
|                          | U/l    | 136    | 109  | 163  | 13.50 | 27.00 | Tris buffer without P5P 37°C                |
|                          | U/l    | 92     | 74   | 110  | 9.00  | 18.00 | Tris buffer without P5P 30°C                |
|                          | U/l    | 65     | 52   | 78   | 6.50  | 13.00 | Tris buffer without P5P 25°C                |
|                          | U/l    | 177    | 141  | 213  | 18.00 | 36.00 | Tris buffer with P5P NVKC 37°C              |
|                          | U/l    | 120    | 95   | 145  | 12.50 | 25.00 | Tris buffer with P5P NVKC 30°C              |
|                          | U/l    | 84     | 67   | 101  | 8.50  | 17.00 | Tris buffer with P5P NVKC 25°C              |
| Bile Acids               | µmol/l | 41.9   | 33.5 | 50.3 | 4.20  | 8.40  | 4th Generation Colorimetric                 |
|                          | µmol/l | 42.7   | 34.2 | 51.2 | 4.25  | 8.50  | 5th Generation Colorimetric                 |
| Bicarbonate              | mmol/l | 14.0   | 11.1 | 16.9 | 1.45  | 2.90  | Colorimetric                                |
|                          | mmol/l | 13.7   | 10.9 | 16.5 | 1.40  | 2.80  | Enzymatic                                   |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte          | unit   | Target | low  | high  | 1SD   | 2SD                 | methods                                |
|------------------|--------|--------|------|-------|-------|---------------------|--|
| Bilirubin Direct | µmol/l | 27.3   | 21.5 | 33.1  | 2.90  | 5.80                | Dichlorophenyl Diazonium (DPD)         |
|                  | mg/dl  | 1.60   | 1.26 | 1.94  | 0.17  | 0.34                |  |
|                  | µmol/l | 30.0   | 23.7 | 36.3  | 3.15  | 6.30                | Diazo with Sulphanilic Acid            |
|                  | mg/dl  | 1.76   | 1.39 | 2.13  | 0.19  | 0.37                |  |
|                  | µmol/l | 30.1   | 23.7 | 36.5  | 3.20  | 6.40                | Diazo with Dichloroaniline (DCA)       |
|                  | mg/dl  | 1.76   | 1.39 | 2.13  | 0.19  | 0.37                |  |
|                  | µmol/l | 29.9   | 23.6 | 36.2  | 3.15  | 6.30                | Oxidation to Biliverdin/Vanadate       |
|                  | mg/dl  | 1.75   | 1.38 | 2.12  | 0.19  | 0.37                |  |
|                  | µmol/l | 31.2   | 24.6 | 37.8  | 3.30  | 6.60                | Modified Jendrassik                    |
|                  | mg/dl  | 1.83   | 1.44 | 2.22  | 0.20  | 0.39                |  |
| Bilirubin Total  | µmol/l | 81.9   | 64.7 | 99.1  | 8.60  | 17.20               | Vitros 250/500/700/950 Total Bilirubin |
|                  | mg/dl  | 4.79   | 3.78 | 5.80  | 0.51  | 1.01                |  |
|                  | µmol/l | 89.8   | 70.9 | 109   | 9.45  | 18.90               | Diazo with Dichloroaniline (DCA)       |
|                  | mg/dl  | 5.25   | 4.15 | 6.35  | 0.55  | 1.10                |  |
|                  | µmol/l | 84.8   | 67.0 | 103   | 8.90  | 17.80               | Diazo with Sulphanilic Acid            |
|                  | mg/dl  | 4.96   | 3.92 | 6.00  | 0.52  | 1.04                |  |
|                  | µmol/l | 79.8   | 63.0 | 96.6  | 8.40  | 16.80               | Dichlorophenyl Diazonium (DPD)         |
|                  | mg/dl  | 4.67   | 3.69 | 5.65  | 0.49  | 0.98                |  |
|                  | µmol/l | 86.9   | 68.6 | 105   | 9.15  | 18.30               | Nitrobenzenediazonium salt             |
|                  | mg/dl  | 5.08   | 4.01 | 6.15  | 0.54  | 1.07                |  |
|                  | µmol/l | 83.5   | 65.9 | 101   | 8.80  | 17.60               | Diazonium ion                          |
|                  | mg/dl  | 4.88   | 3.86 | 5.90  | 0.51  | 1.02                |  |
|                  | µmol/l | 97.0   | 76.6 | 117   | 10.20 | 20.40               | Oxidation to Biliverdin/Vanadate       |
|                  | mg/dl  | 5.67   | 4.48 | 6.86  | 0.60  | 1.19                |  |
| µmol/l           | 96.6   | 76.3   | 117  | 10.15 | 20.30 | Modified Jendrassik |  |
| mg/dl            | 5.65   | 4.46   | 6.84 | 0.60  | 1.19  |                     |  |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte     | unit   | Target | low  | high  | 1SD   | 2SD                       | methods                             |
|-------------|--------|--------|------|-------|-------|---------------------------|-------------------------------------|
| Calcium     | mmol/l | 3.08   | 2.77 | 3.39  | 0.16  | 0.31                      | Cresolphthalein complexone          |
|             | mg/dl  | 12.3   | 11.1 | 13.5  | 0.60  | 1.20                      |                                     |
|             | 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 | 3.01   | 2.71 | 3.31  | 0.15  | 0.30                      | Ion selective electrode             |
|             | mg/dl  | 12.1   | 10.9 | 13.3  | 0.60  | 1.20                      |                                     |
|             | mmol/l | 3.10   | 2.79 | 3.41  | 0.16  | 0.31                      | Methylthymol blue                   |
|             | mg/dl  | 12.4   | 11.2 | 13.6  | 0.60  | 1.20                      |                                     |
|             | mmol/l | 3.06   | 2.75 | 3.37  | 0.16  | 0.31                      | Arsenazo III                        |
|             | mg/dl  | 12.3   | 11.0 | 13.6  | 0.65  | 1.30                      |                                     |
| mmol/l      | 3.07   | 2.77   | 3.37 | 0.15  | 0.30  | NM-BAPTA                  |                                     |
| mg/dl       | 12.3   | 11.1   | 13.5 | 0.60  | 1.20  |                           |                                     |
| mmol/l      | 1.05   | 0.95   | 1.16 | 0.05  | 0.11  | Ionised calcium           |                                     |
| mg/dl       | 4.21   | 3.79   | 4.63 | 0.21  | 0.42  |                           |                                     |
| Cholesterol | mmol/l | 6.84   | 5.95 | 7.73  | 0.45  | 0.89                      | Ortho Vitros Microslide Systems     |
|             | mg/dl  | 264    | 230  | 298   | 17.00 | 34.00                     |                                     |
|             | mmol/l | 7.18   | 6.25 | 8.11  | 0.47  | 0.93                      | Cholesterol Oxidase - Abell Kendall |
|             | mg/dl  | 277    | 241  | 313   | 18.00 | 36.00                     |                                     |
|             | mmol/l | 7.21   | 6.27 | 8.15  | 0.47  | 0.94                      | Cholesterol Oxidase - IDMS          |
|             | mg/dl  | 278    | 242  | 314   | 18.00 | 36.00                     |                                     |
| mmol/l      | 7.19   | 6.25   | 8.13 | 0.47  | 0.94  | Cholesterol Dehydrogenase |                                     |
| mg/dl       | 278    | 241    | 315  | 18.50 | 37.00 |                           |                                     |
| Chloride    | mmol/l | 117    | 108  | 126   | 4.50  | 9.00                      | Colorimetric                        |
|             | mmol/l | 114    | 105  | 123   | 4.50  | 9.00                      | Ortho Vitros Microslide Systems     |

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte        | unit   | Target | low  | high | 1SD    | 2SD     | methods                                |
|----------------|--------|--------|------|------|--------|---------|--|
| Chloride       | mmol/l | 112    | 103  | 121  | 4.50   | 9.00    | ISE indirect                           |
|                | mmol/l | 112    | 103  | 121  | 4.50   | 9.00    | ISE direct                             |
| Cholinesterase | U/l    | 5402   | 4321 | 6483 | 540.50 | 1081.00 | Colorimetric Butyrylthiocholine 37°C   |
| CK Total       | U/l    | 423    | 347  | 499  | 38.00  | 76.00   | Ortho Vitros Microslide Systems 37°C   |
|                | U/l    | 520    | 426  | 614  | 47.00  | 94.00   | CK-NAC serum start (DGKC) 37°C         |
|                | U/l    | 326    | 267  | 385  | 29.50  | 59.00   | CK-NAC serum start (DGKC) 30°C         |
|                | U/l    | 221    | 181  | 261  | 20.00  | 40.00   | CK-NAC serum start (DGKC) 25°C         |
|                | U/l    | 535    | 439  | 631  | 48.00  | 96.00   | CK-NAC substrate start (DGKC) 37°C     |
|                | U/l    | 335    | 275  | 395  | 30.00  | 60.00   | CK-NAC substrate start (DGKC) 30°C     |
|                | U/l    | 227    | 187  | 267  | 20.00  | 40.00   | CK-NAC substrate start (DGKC) 25°C     |
|                | U/l    | 519    | 425  | 613  | 47.00  | 94.00   | CK-NAC (IFCC) 37°C                     |
|                | U/l    | 325    | 266  | 384  | 29.50  | 59.00   | CK-NAC (IFCC) 30°C                     |
|                | U/l    | 221    | 181  | 261  | 20.00  | 40.00   | CK-NAC (IFCC) 25°C                     |
| Copper         | µmol/l | 25.8   | 20.6 | 31.0 | 2.60   | 5.20    | Atomic absorption                      |
|                | µg/dl  | 164    | 131  | 197  | 16.50  | 33.00   |  |
|                | µmol/l | 25.3   | 20.2 | 30.4 | 2.55   | 5.10    | Colorimetric                           |
|                | µg/dl  | 161    | 128  | 194  | 16.50  | 33.00   |  |
| Cortisol       | nmol/l | 945    | 709  | 1181 | 118.00 | 236.00  | Roche Cobas e402/e801                  |
|                | µg/dl  | 34.0   | 25.5 | 42.5 | 4.25   | 8.50    |  |
| Creatinine     | µmol/l | 385    | 308  | 462  | 38.50  | 77.00   | Alkaline picrate with deproteinization |
|                | mg/dl  | 4.35   | 3.48 | 5.22 | 0.44   | 0.87    |  |
|                | µmol/l | 386    | 308  | 464  | 39.00  | 78.00   | Alkaline picrate no deproteinization   |
|                | mg/dl  | 4.36   | 3.48 | 5.24 | 0.44   | 0.88    |  |
|                | µmol/l | 404    | 324  | 484  | 40.00  | 80.00   | Enzymatic UV method                    |
|                | mg/dl  | 4.57   | 3.66 | 5.48 | 0.46   | 0.91    |  |



## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods                                     |
|---------------------|--------|--------|------|------|-------|-------|---|
| Creatinine          | 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 | 396    | 317  | 475  | 39.50 | 79.00 | Jaffe rate blanked                          |
|                     | mg/dl  | 4.47   | 3.58 | 5.36 | 0.45  | 0.89  |   |
|                     | µmol/l | 392    | 314  | 470  | 39.00 | 78.00 | Jaffe rate blanked comp. (-26 µmol/l)       |
|                     | mg/dl  | 4.43   | 3.55 | 5.31 | 0.44  | 0.88  |   |
|                     | 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  |   |
| D-3-Hydroxybutyrate | µmol/l | 397    | 318  | 476  | 39.50 | 79.00 | Vitros IDMS Traceable                       |
|                     | mg/dl  | 4.49   | 3.59 | 5.39 | 0.45  | 0.90  |   |
| Digoxin             | µmol/l | 391    | 313  | 469  | 39.00 | 78.00 | IDMS traceable                              |
|                     | mg/dl  | 4.42   | 3.54 | 5.30 | 0.44  | 0.88  |   |
| D-3-Hydroxybutyrate | mmol/l | 1.10   | 0.93 | 1.27 | 0.08  | 0.17  | Tris buffer 100mmol pH 8.5                  |
|                     | nmol/l | 3.74   | 2.99 | 4.49 | 0.38  | 0.75  | Immunoturbidimetric                         |
| Digoxin             | ng/ml  | 2.92   | 2.34 | 3.50 | 0.29  | 0.58  |   |
|                     | nmol/l | 7.05   | 5.36 | 8.74 | 0.85  | 1.69  | Roche Cobas e402/e801                       |
| Folate              | ng/ml  | 3.11   | 2.36 | 3.86 | 0.38  | 0.75  |   |
|                     | pmol/l | 54.2   | 40.7 | 67.7 | 6.75  | 13.50 | Abbott Architect                            |
| Free T4             | ng/dl  | 4.23   | 3.17 | 5.29 | 0.53  | 1.06  |   |
|                     | pg/ml  | 42.3   | 31.7 | 52.9 | 5.30  | 10.60 | Abbott Architect                            |
|                     | pmol/l | 66.3   | 49.7 | 82.9 | 8.30  | 16.60 | Siemens Centaur XP/XPT/Classic              |
|                     | ng/dl  | 5.17   | 3.88 | 6.46 | 0.65  | 1.29  |   |
|                     | pg/ml  | 51.7   | 38.8 | 64.6 | 6.45  | 12.90 | Siemens Centaur XP/XPT/Classic              |
|                     | pmol/l | 61.0   | 45.8 | 76.2 | 7.60  | 15.20 | Beckman Access                              |
|                     | ng/dl  | 4.76   | 3.57 | 5.95 | 0.60  | 1.19  |   |
|                     | pg/ml  | 47.6   | 35.7 | 59.5 | 5.95  | 11.90 | Beckman Access                              |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte    | unit   | Target | low  | high | 1SD   | 2SD  | methods  |
|------------|--------|--------|------|------|-------|--|--|
| Free T4    | pmol/l | 77.3   | 58.0 | 96.6 | 9.65  | 19.30  | Roche Cobas 4000/E411                                |
|            | ng/dl  | 6.03   | 4.52 | 7.54 | 0.76  | 1.51   |  |
|            | pg/ml  | 60.3   | 45.2 | 75.4 | 7.55  | 15.10  | Roche Cobas 4000/E411                                |
|            | pmol/l | 81.8   | 61.3 | 102  | 10.25 | 20.50  | Roche Cobas e601/602                                 |
|            | ng/dl  | 6.38   | 4.78 | 7.98 | 0.80  | 1.60   |  |
|            | pg/ml  | 63.8   | 47.8 | 79.8 | 8.00  | 16.00  | Roche Cobas e601/602                                 |
|            | pmol/l | 74.8   | 56.1 | 93.5 | 9.35  | 18.70  | Biomerieux Vidas FT4N Kit                            |
|            | ng/dl  | 5.83   | 4.38 | 7.28 | 0.73  | 1.45   |  |
|            | pg/ml  | 58.3   | 43.8 | 72.8 | 7.25  | 14.50  | Biomerieux Vidas FT4N Kit                            |
|            | 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 | 22.8 | 1.90  | 3.80   | Gravimetric  |
|            | µg/ml  | 9.08   | 7.27 | 10.9 | 0.91  | 1.81   |  |
| gamma-GT   | U/l    | 154    | 131  | 177  | 11.50 | 23.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C        |
|            | U/l    | 121    | 103  | 139  | 9.00  | 18.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C        |
|            | U/l    | 95     | 81   | 109  | 7.00  | 14.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C        |
|            | U/l    | 194    | 165  | 223  | 14.50 | 29.00  | Ortho Vitros Microslide Systems 37°C                 |
|            | U/l    | 163    | 138  | 188  | 12.50 | 25.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C  |
|            | U/l    | 128    | 109  | 147  | 9.50  | 19.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C  |
|            | U/l    | 101    | 85   | 117  | 8.00  | 16.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C  |
|            | U/l    | 173    | 147  | 199  | 13.00 | 26.00  | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
|            | U/l    | 136    | 116  | 156  | 10.00 | 20.00  | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| U/l        | 107    | 91     | 123  | 8.00 | 16.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |  |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods                                    |
|-------------------|--------|--------|------|------|-------|-------|--|
| GLDH              | U/l    | 30     | 24   | 36   | 3.00  | 6.00  | Triethanolamine buffer 50 mmol 37°C        |
|                   | U/l    | 23     | 18   | 28   | 2.50  | 5.00  | Triethanolamine buffer 50 mmol 30°C        |
|                   | U/l    | 19     | 15   | 23   | 2.00  | 4.00  | Triethanolamine buffer 50 mmol 25°C        |
| Glucose           | mmol/l | 14.9   | 12.7 | 17.1 | 1.10  | 2.20  | Ortho Vitros Microslide Systems            |
|                   | mg/dl  | 268    | 229  | 307  | 19.50 | 39.00 |  |
|                   | 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 | 15.7   | 13.3 | 18.1 | 1.20  | 2.40  | Hexokinase                                 |
|                   | mg/dl  | 283    | 240  | 326  | 21.50 | 43.00 |  |
| alpha-HBDH        | mmol/l | 15.8   | 13.4 | 18.2 | 1.20  | 2.40  | Glucose oxidase                            |
|                   | mg/dl  | 285    | 241  | 329  | 22.00 | 44.00 |  |
|                   | U/l    | 367    | 290  | 444  | 38.50 | 77.00 | Oxobutyrate < 10 mmol/l 37°C               |
| HDL - Cholesterol | U/l    | 277    | 219  | 335  | 29.00 | 58.00 | Oxobutyrate < 10 mmol/l 30°C               |
|                   | U/l    | 208    | 164  | 252  | 22.00 | 44.00 | Oxobutyrate < 10 mmol/l 25°C               |
|                   | mmol/l | 2.47   | 2.10 | 2.84 | 0.19  | 0.37  | Direct HDL PPD                             |
| HDL - Cholesterol | mg/dl  | 95.3   | 81.1 | 110  | 7.10  | 14.20 |  |
|                   | mmol/l | 2.55   | 2.17 | 2.93 | 0.19  | 0.38  | Direct HDL Immunoseparation                |
|                   | mg/dl  | 98.4   | 83.8 | 113  | 7.30  | 14.60 |  |
|                   | mmol/l | 2.42   | 2.06 | 2.78 | 0.18  | 0.36  | Vitros Magnetic HDL                        |
|                   | mg/dl  | 93.4   | 79.5 | 107  | 6.95  | 13.90 |  |
|                   | mmol/l | 2.80   | 2.38 | 3.22 | 0.21  | 0.42  | Direct HDL PEGME                           |
|                   | mg/dl  | 108    | 91.9 | 124  | 8.05  | 16.10 |  |
|                   | mmol/l | 2.35   | 1.99 | 2.71 | 0.18  | 0.36  | Direct Clearance Method                    |
|                   | mg/dl  | 90.7   | 76.8 | 105  | 6.95  | 13.90 |  |
|                   | mmol/l | 2.49   | 2.12 | 2.86 | 0.19  | 0.37  | Vitros dHDL PTA/MgCl2 direct precipitation |
|                   | mg/dl  | 96.1   | 81.8 | 110  | 7.15  | 14.30 |  |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte           | unit   | Target | low   | high | 1SD   | 2SD   | methods                         |
|-------------------|--------|--------|-------|------|-------|-------|---------------------------------|
| HDL - Cholesterol | mmol/l | 2.43   | 2.07  | 2.79 | 0.18  | 0.36  | HDL - Ultra                     |
|                   | mg/dl  | 93.8   | 79.9  | 108  | 6.95  | 13.90 |                                 |
|                   | mmol/l | 2.93   | 2.49  | 3.37 | 0.22  | 0.44  | Direct HDL Roche 4th Generation |
|                   | mg/dl  | 113    | 96.1  | 130  | 8.45  | 16.90 |                                 |
| Immunoglobulin A  | g/l    | 1.84   | 1.38  | 2.30 | 0.230 | 0.460 | Immunoturbidimetric             |
|                   | mg/dl  | 184    | 138   | 230  | 23.0  | 46.0  |                                 |
| Immunoglobulin G  | g/l    | 6.08   | 4.99  | 7.17 | 0.545 | 1.09  | Immunoturbidimetric             |
|                   | mg/dl  | 608    | 499   | 717  | 54.5  | 109   |                                 |
| Immunoglobulin M  | g/l    | 1.00   | 0.800 | 1.20 | 0.100 | 0.200 | Immunoturbidimetric             |
|                   | mg/dl  | 100    | 80.0  | 120  | 10.0  | 20.0  |                                 |
| Iron              | µmol/l | 36.9   | 30.2  | 43.6 | 3.35  | 6.70  | Colorimetric with ppt.          |
|                   | µg/dl  | 206    | 169   | 243  | 18.50 | 37.00 |                                 |
|                   | µmol/l | 37.0   | 30.4  | 43.6 | 3.30  | 6.60  | Colorimetric without ppt.       |
|                   | µg/dl  | 207    | 170   | 244  | 18.50 | 37.00 |                                 |
|                   | µmol/l | 34.4   | 28.2  | 40.6 | 3.10  | 6.20  | Ortho Vitros Microslide Systems |
|                   | µg/dl  | 192    | 158   | 226  | 17.00 | 34.00 |                                 |
| Lactate           | mmol/l | 5.34   | 4.38  | 6.30 | 0.48  | 0.96  | Ion selective electrode         |
|                   | mg/dl  | 48.1   | 39.5  | 56.7 | 4.30  | 8.60  |                                 |
|                   | mmol/l | 5.32   | 4.36  | 6.28 | 0.48  | 0.96  | Colorimetric Lactate Oxidase    |
|                   | mg/dl  | 47.9   | 39.3  | 56.5 | 4.30  | 8.60  |                                 |
|                   | mmol/l | 4.87   | 3.99  | 5.75 | 0.44  | 0.88  | Ortho Vitros Microslide Systems |
|                   | mg/dl  | 43.9   | 35.9  | 51.9 | 4.00  | 8.00  |                                 |
|                   | mmol/l | 5.01   | 4.11  | 5.91 | 0.45  | 0.90  | Enzymatic Electrode             |
|                   | mg/dl  | 45.1   | 37.0  | 53.2 | 4.05  | 8.10  |                                 |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte   | unit   | Target | low  | high  | 1SD   | 2SD            | methods                              |
|-----------|--------|--------|------|-------|-------|----------------|--------------------------------------|
| LD (LDH)  | U/l    | 331    | 281  | 381   | 25.00 | 50.00          | L->P 37°C                            |
|           | U/l    | 239    | 203  | 275   | 18.00 | 36.00          | L->P 30°C                            |
|           | U/l    | 168    | 142  | 194   | 13.00 | 26.00          | L->P 25°C                            |
|           | U/l    | 737    | 626  | 848   | 55.50 | 111.00         | P->L Scandinavian & Dutch 37°C       |
|           | U/l    | 532    | 452  | 612   | 40.00 | 80.00          | P->L Scandinavian & Dutch 30°C       |
|           | U/l    | 374    | 317  | 431   | 28.50 | 57.00          | P->L Scandinavian & Dutch 25°C       |
|           | U/l    | 696    | 592  | 800   | 52.00 | 104.00         | P->L German methods 37°C             |
|           | U/l    | 503    | 427  | 579   | 38.00 | 76.00          | P->L German methods 30°C             |
|           | U/l    | 353    | 300  | 406   | 26.50 | 53.00          | P->L German methods 25°C             |
|           | U/l    | 710    | 604  | 816   | 53.00 | 106.00         | P->L SFBC 37°C                       |
|           | U/l    | 513    | 436  | 590   | 38.50 | 77.00          | P->L SFBC 30°C                       |
|           | U/l    | 360    | 306  | 414   | 27.00 | 54.00          | P->L SFBC 25°C                       |
|           | U/l    | 346    | 294  | 398   | 26.00 | 52.00          | L->P IFCC 37°C                       |
|           | U/l    | 250    | 212  | 288   | 19.00 | 38.00          | L->P IFCC 30°C                       |
| U/l       | 175    | 149    | 201  | 13.00 | 26.00 | L->P IFCC 25°C |                                      |
| Lipase    | U/l    | 361    | 307  | 415   | 27.00 | 54.00          | Ortho Vitros IFCC Traceable 37°C     |
|           | U/l    | 76     | 61   | 91    | 7.50  | 15.00          | Other Colorimetric 37°C              |
|           | U/l    | 833    | 668  | 998   | 82.50 | 165.00         | Ortho Vitros Microslide Systems 37°C |
|           | U/l    | 78     | 62   | 94    | 8.00  | 16.00          | Roche Colorimetric 37°C              |
| Lithium   | U/l    | 98     | 79   | 117   | 9.50  | 19.00          | Randox Colorimetric 37°C             |
|           | mmol/l | 2.10   | 1.85 | 2.35  | 0.13  | 0.25           | Ion selective electrode              |
|           | mg/dl  | 1.46   | 1.28 | 1.64  | 0.09  | 0.18           |                                      |
|           | mmol/l | 1.98   | 1.75 | 2.21  | 0.12  | 0.23           | Spectrophotometric                   |
| Magnesium | mg/dl  | 1.37   | 1.22 | 1.52  | 0.08  | 0.15           |                                      |
|           | mmol/l | 1.79   | 1.58 | 2.00  | 0.11  | 0.21           | Arsenazo III                         |
|           | mg/dl  | 4.35   | 3.84 | 4.86  | 0.26  | 0.51           |                                      |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte             | unit    | Target | low  | high | 1SD   | 2SD                  | methods                         |
|---------------------|---------|--------|------|------|-------|----------------------|---------------------------------|
| Magnesium           | mmol/l  | 1.86   | 1.64 | 2.08 | 0.11  | 0.22                 | Ortho Vitros Microslide Systems |
|                     | mg/dl   | 4.52   | 3.99 | 5.05 | 0.27  | 0.53                 |                                 |
|                     | mmol/l  | 1.81   | 1.60 | 2.02 | 0.11  | 0.21                 | Calmagite                       |
|                     | mg/dl   | 4.40   | 3.89 | 4.91 | 0.26  | 0.51                 |                                 |
|                     | mmol/l  | 1.83   | 1.61 | 2.05 | 0.11  | 0.22                 | Xylidyl Blue                    |
|                     | mg/dl   | 4.45   | 3.91 | 4.99 | 0.27  | 0.54                 |                                 |
|                     | mmol/l  | 1.89   | 1.66 | 2.12 | 0.12  | 0.23                 | Methylthymol blue               |
|                     | mg/dl   | 4.59   | 4.03 | 5.15 | 0.28  | 0.56                 |                                 |
| mmol/l              | 1.84    | 1.62   | 2.06 | 0.11 | 0.22  | Chlorphosphonazo III |                                 |
| mg/dl               | 4.47    | 3.94   | 5.00 | 0.27 | 0.53  |                      |                                 |
| mmol/l              | 1.83    | 1.61   | 2.05 | 0.11 | 0.22  | Enzymatic            |                                 |
| mg/dl               | 4.45    | 3.91   | 4.99 | 0.27 | 0.54  |                      |                                 |
| NEFA                | mmol/l  | 0.56   | 0.45 | 0.68 | 0.06  | 0.11                 | Colorimetric                    |
| Osmolality          | mOsm/kg | 352    | 282  | 422  | 35.00 | 70.00                | Calculated                      |
|                     | mOsm/kg | 375    | 300  | 450  | 37.50 | 75.00                | 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  | 2.37   | 2.01 | 2.73 | 0.18  | 0.36                 | Ortho Vitros Microslide Systems |
|                     | mg/dl   | 7.35   | 6.23 | 8.47 | 0.56  | 1.12                 |                                 |
|                     | 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              | 2.35    | 2.00   | 2.70 | 0.18 | 0.35  | Phosphomolybdate UV  |                                 |
| mg/dl               | 7.29    | 6.20   | 8.38 | 0.55 | 1.09  |                      |                                 |
| Potassium           | mmol/l  | 5.95   | 5.47 | 6.43 | 0.24  | 0.48                 | Ortho Vitros Microslide Systems |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte                     | unit    | Target | low  | high | 1SD   | 2SD   | methods                                  |
|-----------------------------|---------|--------|------|------|-------|-------|--|
| Potassium                   | mmol/l  | 5.97   | 5.49 | 6.45 | 0.24  | 0.48  | ISE method - direct                      |
|                             | mmol/l  | 6.06   | 5.58 | 6.54 | 0.24  | 0.48  | ISE method - indirect                    |
|                             | mmol/l  | 6.22   | 5.72 | 6.72 | 0.25  | 0.50  | Enzymatic                                |
| Protein Total               | g/l     | 47.0   | 37.6 | 56.4 | 4.70  | 9.40  | Ortho Vitros Microslide Systems          |
|                             | g/dl    | 4.70   | 3.76 | 5.64 | 0.47  | 0.94  |  |
|                             | g/l     | 45.5   | 36.4 | 54.6 | 4.55  | 9.10  | Biuret reaction end point                |
|                             | g/dl    | 4.55   | 3.64 | 5.46 | 0.46  | 0.91  |  |
|                             | g/l     | 45.5   | 36.4 | 54.6 | 4.55  | 9.10  | Biuret reaction kinetic                  |
| PSA Total                   | ng/ml = | 21.6   | 16.2 | 27.0 | 2.70  | 5.40  | Beckman Access standardised to Hybritech |
|                             | ng/ml = | 22.0   | 16.5 | 27.5 | 2.75  | 5.50  | bioMerieux VIDAS TPSA                    |
|                             | ng/ml = | 18.1   | 13.6 | 22.6 | 2.25  | 4.50  | Siemens Centaur XP/XPT/Classic           |
|                             | ng/ml = | 16.3   | 12.2 | 20.4 | 2.05  | 4.10  | Abbott Architect                         |
|                             | ng/ml = | 20.5   | 15.4 | 25.6 | 2.55  | 5.10  | Cobas E411                               |
|                             | ng/ml = | 20.0   | 15.0 | 25.0 | 2.50  | 5.00  | Roche Cobas 6000/8000                    |
| 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  | 156    | 148  | 164  | 4.00  | 8.00  | ISE method - direct                      |
|                             | mmol/l  | 158    | 150  | 166  | 4.00  | 8.00  | ISE method - indirect                    |
|                             | mmol/l  | 161    | 153  | 169  | 4.00  | 8.00  | Enzymatic                                |
| 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 = | 1.05   | 0.84 | 1.26 | 0.10  | 0.21  | Abbott Architect                         |
|                             | µU/ml = | 1.32   | 1.05 | 1.59 | 0.14  | 0.27  | bioMerieux VIDAS TSH                     |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte                     | unit    | Target | low  | high | 1SD   | 2SD   | methods                                   |
|-----------------------------|---------|--------|------|------|-------|-------|---|
| Thyroid Stimulating Hormone | µU/ml = | 1.47   | 1.18 | 1.76 | 0.15  | 0.29  | Roche Cobas 4000/E411                     |
|                             | µU/ml = | 1.48   | 1.18 | 1.78 | 0.15  | 0.30  | Roche Cobas e601/602                      |
|                             | µU/ml = | 1.17   | 0.94 | 1.40 | 0.12  | 0.23  | Siemens Centaur XP/XPT/Classic TSH3-Ultra |
|                             | µU/ml = | 1.22   | 0.98 | 1.46 | 0.12  | 0.24  | Beckman Dxl 600/800 Access (3rd IS)       |
|                             | µU/ml = | 1.48   | 1.18 | 1.78 | 0.15  | 0.30  | Roche Cobas e402/e801                     |
| TIBC                        | µmol/l  | 39.6   | 31.3 | 47.9 | 4.15  | 8.30  | Removal of excess free iron               |
|                             | µg/dl   | 221    | 175  | 267  | 23.00 | 46.00 |   |
|                             | µmol/l  | 41.4   | 32.7 | 50.1 | 4.35  | 8.70  | FE+UIBC(saturation with iron)             |
|                             | µg/dl   | 231    | 183  | 279  | 24.00 | 48.00 |   |
|                             | µmol/l  | 43.9   | 34.7 | 53.1 | 4.60  | 9.20  | Direct Colorimetric                       |
|                             | µg/dl   | 245    | 194  | 296  | 25.50 | 51.00 |   |
|                             | µmol/l  | 43.2   | 34.1 | 52.3 | 4.55  | 9.10  | Calculated from Transferrin               |
|                             | µg/dl   | 241    | 191  | 291  | 25.00 | 50.00 |   |
| 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  | 2.63   | 1.97 | 3.29 | 0.33  | 0.66  | Abbott Architect                          |
|                             | ng/ml   | 1.71   | 1.28 | 2.14 | 0.22  | 0.43  |   |
|                             | ng/dl   | 171    | 128  | 214  | 21.50 | 43.00 | Abbott Architect                          |
|                             | nmol/l  | 3.89   | 2.92 | 4.86 | 0.49  | 0.97  | Roche Cobas 4000/E411                     |
|                             | ng/ml   | 2.53   | 1.90 | 3.16 | 0.32  | 0.63  |   |
|                             | ng/dl   | 253    | 190  | 316  | 31.50 | 63.00 | Roche Cobas 4000/E411                     |
| Total T4                    | nmol/l  | 227    | 170  | 284  | 28.50 | 57.00 | Abbott Architect                          |
|                             | µg/dl   | 17.7   | 13.3 | 22.1 | 2.20  | 4.40  |   |
|                             | ng/ml   | 177    | 133  | 221  | 22.00 | 44.00 | Abbott Architect                          |



## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods                               |
|-------------------|--------|--------|------|------|-------|-------|---------------------------------------|
| Total T4          | nmol/l | 208    | 156  | 260  | 26.00 | 52.00 | Roche Cobas 4000/E411                 |
|                   | µg/dl  | 16.2   | 12.2 | 20.2 | 2.00  | 4.00  |                                       |
|                   | ng/ml  | 162    | 122  | 202  | 20.00 | 40.00 | Roche Cobas 4000/E411                 |
|                   | nmol/l | 198    | 149  | 247  | 24.50 | 49.00 | Roche Cobas e601/602                  |
|                   | µg/dl  | 15.4   | 11.6 | 19.2 | 1.90  | 3.80  |                                       |
|                   | ng/ml  | 154    | 116  | 192  | 19.00 | 38.00 | Roche Cobas e601/602                  |
| Transferrin       | g/l    | 1.77   | 1.42 | 2.12 | 0.18  | 0.35  | Immunoturbidimetric                   |
|                   | mg/dl  | 177    | 142  | 212  | 17.50 | 35.00 |                                       |
| 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 | 2.91   | 2.44 | 3.38 | 0.24  | 0.47  | Lipase/GPO-PAP 0.11mmol/l correction  |
|                   | mg/dl  | 258    | 216  | 300  | 21.00 | 42.00 |                                       |
|                   | mmol/l | 2.90   | 2.44 | 3.36 | 0.23  | 0.46  | L/G Kinase EP. no 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. 0.11 mmol/l correction |
|                   | mg/dl  | 258    | 217  | 299  | 20.50 | 41.00 |                                       |
|                   | mmol/l | 2.90   | 2.43 | 3.37 | 0.24  | 0.47  | Lipase/Glycerol Dehydrogenase         |
|                   | mg/dl  | 257    | 215  | 299  | 21.00 | 42.00 |                                       |
|                   | mmol/l | 3.26   | 2.74 | 3.78 | 0.26  | 0.52  | Ortho Vitros Microslide Systems       |
|                   | mg/dl  | 289    | 242  | 336  | 23.50 | 47.00 |                                       |
| UIBC              | µmol/l | 6.90   | 5.66 | 8.14 | 0.62  | 1.24  | TIBC - FE                             |
|                   | µg/dl  | 38.6   | 31.6 | 45.6 | 3.50  | 7.00  |                                       |
| Uric Acid (Urate) | mmol/l | 0.52   | 0.45 | 0.59 | 0.03  | 0.07  | Ortho Vitros Microslide Systems       |
|                   | mg/dl  | 8.70   | 7.58 | 9.82 | 0.56  | 1.12  |                                       |

## METHOD

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### 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         |
|                   | 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  | 9.21   | 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  | 9.26   | 8.05 | 10.5 | 0.61  | 1.21  |   |
|                   | mmol/l | 0.54   | 0.47 | 0.61 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.09   | 7.90 | 10.3 | 0.60  | 1.19  |   |
| Urea              | mmol/l | 18.3   | 15.5 | 21.1 | 1.40  | 2.80  | Ortho Vitros Microslide Systems                   |
|                   | mg/dl  | 110    | 93.2 | 127  | 8.40  | 16.80 |   |
|                   | mmol/l | 18.9   | 16.1 | 21.7 | 1.40  | 2.80  | Urease end point                                  |
|                   | mg/dl  | 114    | 96.8 | 131  | 8.60  | 17.20 |   |
|                   | 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  |   |
|                   | mmol/l | 18.6   | 15.8 | 21.4 | 1.40  | 2.80  | Urease - hypochlorite                             |
|                   | mg/dl  | 112    | 95.0 | 129  | 8.50  | 17.00 |   |
| Vitamin B12       | pmol/l | 220    | 176  | 264  | 22.00 | 44.00 | Roche Cobas e402/e801                             |
|                   | pg/ml  | 298    | 238  | 358  | 30.00 | 60.00 |   |
| Zinc              | µmol/l | 34.3   | 27.4 | 41.2 | 3.45  | 6.90  | Colorimetric with deproteinisation                |
|                   | µg/dl  | 224    | 179  | 269  | 22.50 | 45.00 |   |

**METHOD (Elec.)**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte                   | unit | Target | low  | high | 1SD  | 2SD  | methods                                |
|---------------------------|------|--------|------|------|------|------|--|
| alpha-1-globulin          |      | 7.6    | 5.8  | 9.4  | 0.91 | 1.82 | % of total Protein (Beckman Capillary) |
| alpha-2-globulin          |      | 11.2   | 8.5  | 13.9 | 1.35 | 2.69 | % of total Protein (Beckman Capillary) |
| Albumin (electrophoresis) |      | 56.0   | 50.5 | 61.5 | 2.75 | 5.50 | % of total Protein (Beckman Capillary) |
| beta-globulin             |      | 12.4   | 9.4  | 15.4 | 1.49 | 2.98 | % of total Protein (Beckman Capillary) |
| gamma-globulin            |      | 12.8   | 9.7  | 15.9 | 1.54 | 3.07 | % of total Protein (Beckman Capillary) |

## Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                             |
|----------------------|--------|--------|------|------|-------|-------|-------------------------------------|
| Albumin              | g/l    | 28.8   | 24.5 | 33.1 | 2.15  | 4.30  | Bromocresol Green                   |
|                      | g/dl   | 2.88   | 2.45 | 3.31 | 0.22  | 0.43  |                                     |
|                      | g/l    | 28.6   | 24.3 | 32.9 | 2.15  | 4.30  | Bromocresol Purple                  |
|                      | g/dl   | 2.86   | 2.43 | 3.29 | 0.22  | 0.43  |                                     |
| Alkaline Phosphatase | U/l    | 332    | 282  | 382  | 25.00 | 50.00 | AMP optimised to IFCC 37°C          |
|                      | U/l    | 332    | 282  | 382  | 25.00 | 50.00 | AMP non-optimised 37°C              |
| ALT (GPT)            | U/l    | 142    | 113  | 171  | 14.50 | 29.00 | Tris buffer without P5P 37°C        |
| Amylase Pancreatic   | U/l    | 234    | 199  | 269  | 17.50 | 35.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total        | U/l    | 291    | 248  | 334  | 21.50 | 43.00 | Abbott Architect Non-IFCC Cal. 37°C |
|                      | U/l    | 333    | 283  | 383  | 25.00 | 50.00 | Abbott Architect IFCC Cal. 37°C     |
| AST (GOT)            | U/l    | 133    | 106  | 160  | 13.50 | 27.00 | Tris buffer without P5P 37°C        |
| Bile Acids           | µmol/l | 43.8   | 35.0 | 52.6 | 4.40  | 8.80  | Enzymatic Colorimetric              |
| Bicarbonate          | mmol/l | 12.6   | 9.97 | 15.2 | 1.32  | 2.63  | Enzymatic                           |
| Bilirubin Direct     | µmol/l | 30.3   | 23.9 | 36.7 | 3.20  | 6.40  | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 1.77   | 1.40 | 2.14 | 0.19  | 0.37  |                                     |
|                      | µmol/l | 30.3   | 23.9 | 36.7 | 3.20  | 6.40  | Diazo with Dichloroaniline (DCA)    |
|                      | mg/dl  | 1.77   | 1.40 | 2.14 | 0.19  | 0.37  |                                     |
| Bilirubin Total      | µmol/l | 90.3   | 71.3 | 109  | 9.50  | 19.00 | Diazo with Dichloroaniline (DCA)    |
|                      | mg/dl  | 5.28   | 4.17 | 6.39 | 0.56  | 1.11  |                                     |
|                      | µmol/l | 90.5   | 71.5 | 110  | 9.50  | 19.00 | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 5.29   | 4.18 | 6.40 | 0.56  | 1.11  |                                     |


**Abbott Alinity/ Architect c/ci Systems®**
**ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

**Range**

| Analyte           | unit   | Target | low  | high | 1SD    | 2SD     | methods   |
|-------------------|--------|--------|------|------|--------|---------|---|
| Bilirubin Total   | µmol/l | 88.8   | 70.2 | 107  | 9.30   | 18.60   | Diazonium ion                                       |
|                   | mg/dl  | 5.19   | 4.11 | 6.27 | 0.54   | 1.08    |   |
| 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 | 7.16   | 6.23 | 8.09 | 0.47   | 0.93    | Cholesterol Oxidase - Abell Kendall                 |
|                   | mg/dl  | 276    | 240  | 312  | 18.00  | 36.00   |   |
| Chloride          | mmol/l | 113    | 104  | 122  | 4.50   | 9.00    | ISE indirect  |
| Cholinesterase    | U/l    | 6003   | 4802 | 7204 | 600.50 | 1201.00 | Colorimetric Butyrylthiocholine 37°C                |
| CK Total          | U/l    | 520    | 426  | 614  | 47.00  | 94.00   | CK-NAC (IFCC) 37°C                                  |
|                   | U/l    | 540    | 442  | 638  | 49.00  | 98.00   | Abbott CK-NAC (IFCC) 37°C                           |
| Copper            | µmol/l | 20.3   | 16.3 | 24.3 | 2.00   | 4.00    | Colorimetric  |
|                   | µg/dl  | 129    | 104  | 154  | 12.50  | 25.00   |   |
| Creatinine        | µmol/l | 409    | 327  | 491  | 41.00  | 82.00   | Alkaline picrate no deproteinization                |
|                   | mg/dl  | 4.62   | 3.70 | 5.54 | 0.46   | 0.92    |   |
|                   | µmol/l | 407    | 326  | 488  | 40.50  | 81.00   | Enzymatic UV method                                 |
|                   | mg/dl  | 4.60   | 3.68 | 5.52 | 0.46   | 0.92    |   |
| gamma-GT          | U/l    | 160    | 136  | 184  | 12.00  | 24.00   | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                   | U/l    | 158    | 134  | 182  | 12.00  | 24.00   | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose           | mmol/l | 15.7   | 13.3 | 18.1 | 1.20   | 2.40    | Hexokinase  |
|                   | mg/dl  | 283    | 240  | 326  | 21.50  | 43.00   |   |
|                   | mmol/l | 15.8   | 13.4 | 18.2 | 1.20   | 2.40    | Glucose oxidase                                     |
|                   | mg/dl  | 285    | 241  | 329  | 22.00  | 44.00   |   |
| HDL - Cholesterol | mmol/l | 2.43   | 2.06 | 2.80 | 0.19   | 0.37    | Direct HDL PPD                                      |
|                   | mg/dl  | 93.8   | 79.5 | 108  | 7.15   | 14.30   |   |
|                   | mmol/l | 2.42   | 2.06 | 2.78 | 0.18   | 0.36    | Direct Clearance Method                             |
|                   | mg/dl  | 93.4   | 79.5 | 107  | 6.95   | 13.90   |   |

## Abbott Alinity/ Architect c/ci Systems®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit    | Target | low  | high | 1SD   | 2SD   | methods                      |
|---------------------|---------|--------|------|------|-------|-------|------------------------------|
| HDL - Cholesterol   | mmol/l  | 2.42   | 2.06 | 2.78 | 0.18  | 0.36  | HDL - Ultra                  |
|                     | mg/dl   | 93.4   | 79.5 | 107  | 6.95  | 13.90 |                              |
| Iron                | µmol/l  | 38.1   | 31.3 | 44.9 | 3.40  | 6.80  | Colorimetric with ppt.       |
|                     | µg/dl   | 213    | 175  | 251  | 19.00 | 38.00 |                              |
|                     | µmol/l  | 38.0   | 31.2 | 44.8 | 3.40  | 6.80  | Colorimetric without ppt.    |
|                     | µg/dl   | 212    | 174  | 250  | 19.00 | 38.00 |                              |
| Lactate             | mmol/l  | 5.56   | 4.56 | 6.56 | 0.50  | 1.00  | Colorimetric Lactate Oxidase |
|                     | mg/dl   | 50.1   | 41.1 | 59.1 | 4.50  | 9.00  |                              |
| LD (LDH)            | U/l     | 334    | 284  | 384  | 25.00 | 50.00 | L->P 37°C                    |
|                     | U/l     | 332    | 282  | 382  | 25.00 | 50.00 | L->P IFCC 37°C               |
| Lipase              | U/l     | 72     | 58   | 86   | 7.00  | 14.00 | Other Colorimetric 37°C      |
| Lithium             | mmol/l  | 1.97   | 1.74 | 2.20 | 0.12  | 0.23  | Spectrophotometric           |
|                     | mg/dl   | 1.37   | 1.21 | 1.53 | 0.08  | 0.16  |                              |
| Magnesium           | mmol/l  | 1.80   | 1.59 | 2.01 | 0.11  | 0.21  | Arsenazo III                 |
|                     | mg/dl   | 4.37   | 3.86 | 4.88 | 0.26  | 0.51  |                              |
|                     | mmol/l  | 1.83   | 1.61 | 2.05 | 0.11  | 0.22  | Enzymatic                    |
|                     | mg/dl   | 4.45   | 3.91 | 4.99 | 0.27  | 0.54  |                              |
| Osmolality          | mOsm/kg | 360    | 288  | 432  | 36.00 | 72.00 | Calculated                   |
| 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  | 2.34   | 1.99 | 2.69 | 0.18  | 0.35  | Phosphomolybdate UV          |
|                     | mg/dl   | 7.25   | 6.17 | 8.33 | 0.54  | 1.08  |                              |
| Potassium           | mmol/l  | 6.03   | 5.55 | 6.51 | 0.24  | 0.48  | ISE method - indirect        |
| Protein Total       | g/l     | 46.8   | 37.5 | 56.1 | 4.65  | 9.30  | Biuret reaction end point    |
|                     | g/dl    | 4.68   | 3.75 | 5.61 | 0.47  | 0.93  |                              |

## Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods   |                     |
|-------------------|--------|--------|------|------|-------|-------|---|---------------------|
| Protein Total     | g/l    | 46.6   | 37.3 | 55.9 | 4.65  | 9.30  | Biuret reaction kinetic                           |                     |
|                   | g/dl   | 4.66   | 3.73 | 5.59 | 0.47  | 0.93  |   |                     |
| Sodium            | mmol/l | 158    | 150  | 166  | 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 | 42.9   | 33.9 | 51.9 | 4.50  | 9.00  | Calculated from Transferrin                       |                     |
|                   | μg/dl  | 240    | 190  | 290  | 25.00 | 50.00 |   |                     |
| 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 | 2.92   | 2.46 | 3.38 | 0.23  | 0.46  | L/G Kinase EP. no correction                      |                     |
|                   | mg/dl  | 258    | 218  | 298  | 20.00 | 40.00 |   |                     |
|                   | mmol/l | 2.90   | 2.43 | 3.37 | 0.24  | 0.47  | Lipase/Glycerol Dehydrogenase                     |                     |
|                   | mg/dl  | 257    | 215  | 299  | 21.00 | 42.00 |   |                     |
|                   | UIBC   | μmol/l | 4.40 | 3.61 | 5.19  | 0.40  | 0.79  | Direct Colorimetric |
|                   |        | μg/dl  | 24.6 | 20.2 | 29.0  | 2.20  | 4.40  |                     |
| Uric Acid (Urate) | mmol/l | 0.55   | 0.48 | 0.62 | 0.04  | 0.07  | Uricase peroxidase with 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  | Uricase peroxidase no ascorbate oxidase           |                     |
|                   | mg/dl  | 9.17   | 7.98 | 10.4 | 0.60  | 1.19  |   |                     |
|                   | 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 | 19.6 | 16.6 | 22.6  | 1.50  | 3.00  | Urease kinetic      |
|                   |        | mg/dl  | 118  | 99.8 | 136   | 9.10  | 18.20   |                     |
| mmol/l            |        | 19.6   | 16.7 | 22.5 | 1.45  | 2.90  | BUN   |                     |
| mg/dl             |        | 55.0   | 46.8 | 63.2 | 4.10  | 8.20  |   |                     |

## Beckman Coulter AU Series®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                               |
|----------------------|--------|--------|------|------|-------|-------|---------------------------------------|
| Albumin              | g/l    | 28.2   | 24.0 | 32.4 | 2.10  | 4.20  | Bromocresol Green                     |
|                      | g/dl   | 2.82   | 2.40 | 3.24 | 0.21  | 0.42  |                                       |
| Alkaline Phosphatase | U/l    | 387    | 329  | 445  | 29.00 | 58.00 | AMP optimised to IFCC 37°C            |
|                      | U/l    | 522    | 444  | 600  | 39.00 | 78.00 | Diethanolamine buffer DEA 37°C        |
| ALT (GPT)            | U/l    | 138    | 110  | 166  | 14.00 | 28.00 | Beckman (Extinction Coefficient) 37°C |
|                      | U/l    | 146    | 117  | 175  | 14.50 | 29.00 | Tris buffer without P5P 37°C          |
| Amylase Total        | U/l    | 256    | 218  | 294  | 19.00 | 38.00 | Beckman CNPG3 (Extinction Coeff) 37°C |
|                      | U/l    | 275    | 234  | 316  | 20.50 | 41.00 | Beckman Coulter - blocked pNPG7 37°C  |
|                      | U/l    | 262    | 223  | 301  | 19.50 | 39.00 | Other 2-chloro-pNPG3 37°C             |
| AST (GOT)            | U/l    | 137    | 110  | 164  | 13.50 | 27.00 | Beckman (Extinction Coefficient) 37°C |
|                      | U/l    | 146    | 117  | 175  | 14.50 | 29.00 | Tris buffer without P5P 37°C          |
| Bile Acids           | µmol/l | 41.2   | 33.0 | 49.4 | 4.10  | 8.20  | Enzymatic Colorimetric                |
| Bicarbonate          | mmol/l | 14.7   | 11.7 | 17.7 | 1.50  | 3.00  | Enzymatic                             |
| Bilirubin Direct     | µmol/l | 22.0   | 17.4 | 26.6 | 2.30  | 4.60  | Dichlorophenyl Diazonium (DPD)        |
|                      | mg/dl  | 1.29   | 1.02 | 1.56 | 0.14  | 0.27  |                                       |
| Bilirubin Total      | µmol/l | 88.1   | 69.6 | 107  | 9.25  | 18.50 | Dichlorophenyl Diazonium (DPD)        |
|                      | mg/dl  | 5.15   | 4.07 | 6.23 | 0.54  | 1.08  |                                       |
|                      | µmol/l | 88.1   | 69.6 | 107  | 9.25  | 18.50 | DPD (Beckman AU)                      |
|                      | mg/dl  | 5.15   | 4.07 | 6.23 | 0.54  | 1.08  |                                       |
| 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  |                                       |



## Beckman Coulter AU Series®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte     | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|-------------|--------|--------|------|------|-------|-------|---|
| 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  |   |
| Cholesterol | mmol/l | 7.15   | 6.22 | 8.08 | 0.47  | 0.93  | Cholesterol Oxidase - Abell Kendall                 |
|             | mg/dl  | 276    | 240  | 312  | 18.00 | 36.00 |   |
|             | mmol/l | 7.46   | 6.49 | 8.43 | 0.49  | 0.97  | Cholesterol Oxidase - IDMS                          |
|             | mg/dl  | 288    | 251  | 325  | 18.50 | 37.00 |   |
| Chloride    | mmol/l | 111    | 102  | 120  | 4.50  | 9.00  | ISE indirect  |
| CK Total    | U/l    | 535    | 439  | 631  | 48.00 | 96.00 | Beckman CK-NAC (Extinction Coeff) 37°C              |
|             | U/l    | 552    | 453  | 651  | 49.50 | 99.00 | CK-NAC (IFCC) 37°C                                  |
| Creatinine  | µmol/l | 373    | 298  | 448  | 37.50 | 75.00 | Alkaline picrate no deproteinization                |
|             | mg/dl  | 4.21   | 3.37 | 5.05 | 0.42  | 0.84  |   |
|             | 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 | 387    | 310  | 464  | 38.50 | 77.00 | IDMS traceable                                      |
|             | mg/dl  | 4.37   | 3.50 | 5.24 | 0.44  | 0.87  |   |
|             | 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 | 385    | 308  | 462  | 38.50 | 77.00 | Jaffe rate blanked compensated (-18 µmol/l)         |
|             | mg/dl  | 4.35   | 3.48 | 5.22 | 0.44  | 0.87  |   |
| 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 | 15.8   | 13.4 | 18.2 | 1.20  | 2.40  | Glucose oxidase                                     |
|             | mg/dl  | 285    | 241  | 329  | 22.00 | 44.00 |   |
|             | mmol/l | 15.8   | 13.4 | 18.2 | 1.20  | 2.40  | Hexokinase  |
|             | mg/dl  | 285    | 241  | 329  | 22.00 | 44.00 |   |

## Beckman Coulter AU Series®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit    | Target | low  | high | 1SD   | 2SD    | methods                                |
|---------------------|---------|--------|------|------|-------|--------|--|
| HDL - Cholesterol   | mmol/l  | 2.56   | 2.18 | 2.94 | 0.19  | 0.38   | Direct Clearance Method                |
|                     | mg/dl   | 98.8   | 84.1 | 114  | 7.35  | 14.70  |  |
|                     | mmol/l  | 2.55   | 2.17 | 2.93 | 0.19  | 0.38   | Direct HDL Immunoseparation            |
|                     | mg/dl   | 98.4   | 83.8 | 113  | 7.30  | 14.60  |  |
|                     | 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  |  |
| Iron                | mmol/l  | 2.63   | 2.24 | 3.02 | 0.20  | 0.39   | HDL - Ultra                            |
|                     | mg/dl   | 102    | 86.5 | 118  | 7.75  | 15.50  |  |
|                     | µmol/l  | 39.2   | 32.1 | 46.3 | 3.55  | 7.10   | Colorimetric with ppt.                 |
|                     |         | µg/dl  | 219  | 179  | 259   | 20.00  |  |
|                     | µmol/l  | 37.3   | 30.6 | 44.0 | 3.35  | 6.70   | Colorimetric without ppt.              |
|                     |         | µg/dl  | 209  | 171  | 247   | 19.00  |  |
| Lactate             | mmol/l  | 5.10   | 4.18 | 6.02 | 0.46  | 0.92   | Colorimetric Lactate Oxidase           |
|                     | mg/dl   | 46.0   | 37.7 | 54.3 | 4.15  | 8.30   |  |
| LD (LDH)            | U/l     | 299    | 254  | 344  | 22.50 | 45.00  | L to P Beckman (Extinction Coeff) 37°C |
|                     | U/l     | 342    | 291  | 393  | 25.50 | 51.00  | L->P IFCC 37°C                         |
|                     | U/l     | 314    | 267  | 361  | 23.50 | 47.00  | L->P 37°C                              |
|                     | U/l     | 740    | 629  | 851  | 55.50 | 111.00 | P->L Scandinavian & Dutch 37°C         |
| Lipase              | U/l     | 81     | 65   | 97   | 8.00  | 16.00  | Other 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  | 1.83   | 1.61 | 2.05 | 0.11  | 0.22   | Xylidyl Blue                           |
|                     | mg/dl   | 4.45   | 3.91 | 4.99 | 0.27  | 0.54   |  |
| Osmolality          | mOsm/kg | 351    | 281  | 421  | 35.00 | 70.00  | Calculated                             |
| Phosphate Inorganic | mmol/l  | 2.37   | 2.01 | 2.73 | 0.18  | 0.36   | Phosphomolybdate UV                    |
|                     | mg/dl   | 7.35   | 6.23 | 8.47 | 0.56  | 1.12   |  |

## Beckman Coulter AU Series®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods                                   |
|-------------------|--------|--------|------|------|-------|-------|---|
| Potassium         | mmol/l | 6.00   | 5.52 | 6.48 | 0.24  | 0.48  | ISE method - indirect                     |
| Protein Total     | g/l    | 45.1   | 36.1 | 54.1 | 4.50  | 9.00  | Biuret reaction end point                 |
|                   | g/dl   | 4.51   | 3.61 | 5.41 | 0.45  | 0.90  |   |
| Sodium            | mmol/l | 157    | 149  | 165  | 4.00  | 8.00  | ISE method - indirect                     |
| TIBC              | µmol/l | 42.7   | 33.7 | 51.7 | 4.50  | 9.00  | FE+UIBC(saturation with iron)             |
|                   | µg/dl  | 239    | 188  | 290  | 25.50 | 51.00 |   |
| Triglycerides     | mmol/l | 2.89   | 2.43 | 3.35 | 0.23  | 0.46  | Lipase/GK UV no correction                |
|                   | mg/dl  | 256    | 215  | 297  | 20.50 | 41.00 |   |
|                   | mmol/l | 2.89   | 2.43 | 3.35 | 0.23  | 0.46  | Lipase/GPO-PAP no correction              |
|                   | mg/dl  | 256    | 215  | 297  | 20.50 | 41.00 |   |
| Uric Acid (Urate) | mmol/l | 0.56   | 0.49 | 0.64 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase   |
|                   | mg/dl  | 9.44   | 8.22 | 10.7 | 0.61  | 1.22  |   |
|                   | mmol/l | 0.57   | 0.49 | 0.64 | 0.04  | 0.07  | Uricase peroxidase with ascorbate oxidase |
|                   | mg/dl  | 9.51   | 8.27 | 10.8 | 0.62  | 1.24  |   |
| Urea              | mmol/l | 19.5   | 16.6 | 22.4 | 1.45  | 2.90  | Urease end point                          |
|                   | mg/dl  | 117    | 99.8 | 134  | 8.60  | 17.20 |   |
|                   | mmol/l | 19.6   | 16.7 | 22.5 | 1.45  | 2.90  | Urease kinetic                            |
|                   | mg/dl  | 118    | 100  | 136  | 9.00  | 18.00 |   |
|                   | mmol/l | 19.6   | 16.7 | 22.5 | 1.45  | 2.90  | BUN                                       |
|                   | mg/dl  | 55.0   | 46.8 | 63.2 | 4.10  | 8.20  |   |

## COBAS INTEGRA®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

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  |                                   |
| 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     |
| 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 Total        | U/l    | 264    | 225  | 303  | 19.50 | 39.00 | Roche Integra 2-chloro-pNPG7 37°C |
|                      | U/l    | 264    | 225  | 303  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C    |
| AST (GOT)            | U/l    | 133    | 107  | 159  | 13.00 | 26.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 90     | 72   | 108  | 9.00  | 18.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 63     | 51   | 75   | 6.00  | 12.00 | Tris buffer without P5P 25°C      |
| Bicarbonate          | mmol/l | 14.1   | 11.1 | 17.1 | 1.50  | 3.00  | Enzymatic                         |
| Bilirubin Direct     | µmol/l | 30.0   | 23.7 | 36.3 | 3.15  | 6.30  | Dichlorophenyl Diazonium (DPD)    |
|                      | 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 Sulphanilic Acid       |
|                      | mg/dl  | 1.75   | 1.38 | 2.12 | 0.19  | 0.37  |                                   |
|                      | µmol/l | 29.8   | 23.6 | 36.0 | 3.10  | 6.20  | Roche DPD JG standardised         |
|                      | mg/dl  | 1.74   | 1.38 | 2.10 | 0.18  | 0.36  |                                   |
|                      | µmol/l | 25.9   | 20.4 | 31.4 | 2.75  | 5.50  | Roche DPD Doumas standardised     |
|                      | mg/dl  | 1.52   | 1.19 | 1.85 | 0.17  | 0.33  |                                   |

## COBAS INTEGRA®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte         | unit        | Target | low  | high | 1SD   | 2SD   | methods                               |                                     |
|-----------------|-------------|--------|------|------|-------|-------|---------------------------------------|-------------------------------------|
| Bilirubin Total | µmol/l      | 80.5   | 63.6 | 97.4 | 8.45  | 16.90 | Diazo with Sulphanilic Acid           |                                     |
|                 | mg/dl       | 4.71   | 3.72 | 5.70 | 0.50  | 0.99  |                                       |                                     |
|                 | µmol/l      | 81.7   | 64.5 | 98.9 | 8.60  | 17.20 | Dichlorophenyl Diazonium (DPD)        |                                     |
|                 | mg/dl       | 4.78   | 3.77 | 5.79 | 0.51  | 1.01  |                                       |                                     |
|                 | µmol/l      | 80.6   | 63.6 | 97.6 | 8.50  | 17.00 | Diazonium ion                         |                                     |
|                 | mg/dl       | 4.72   | 3.72 | 5.72 | 0.50  | 1.00  |                                       |                                     |
| Calcium         | mmol/l      | 3.07   | 2.76 | 3.38 | 0.16  | 0.31  | Cresolphthalein complexone            |                                     |
|                 | mg/dl       | 12.3   | 11.1 | 13.5 | 0.60  | 1.20  |                                       |                                     |
|                 | mmol/l      | 3.05   | 2.75 | 3.35 | 0.15  | 0.30  | NM-BAPTA                              |                                     |
|                 | mg/dl       | 12.2   | 11.0 | 13.4 | 0.60  | 1.20  |                                       |                                     |
|                 | Cholesterol | mmol/l | 7.10 | 6.18 | 8.02  | 0.46  | 0.92                                  | Cholesterol Oxidase - Abell Kendall |
|                 |             | mg/dl  | 274  | 239  | 309   | 17.50 | 35.00                                 |                                     |
| mmol/l          |             | 7.07   | 6.15 | 7.99 | 0.46  | 0.92  | Cholesterol Oxidase - IDMS            |                                     |
| mg/dl           |             | 273    | 237  | 309  | 18.00 | 36.00 |                                       |                                     |
| Chloride        |             | mmol/l | 113  | 104  | 122   | 4.50  | 9.00                                  | ISE indirect                        |
|                 |             |        |      |      |       |       |                                       |                                     |
| CK Total        | U/l         | 510    | 418  | 602  | 46.00 | 92.00 | CK-NAC (IFCC) 37°C                    |                                     |
|                 | U/l         | 319    | 262  | 376  | 28.50 | 57.00 | CK-NAC (IFCC) 30°C                    |                                     |
|                 | U/l         | 217    | 178  | 256  | 19.50 | 39.00 | CK-NAC (IFCC) 25°C                    |                                     |
| Creatinine      | 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  |                                       |                                     |
|                 | µmol/l      | 406    | 325  | 487  | 40.50 | 81.00 | Roche Creatinine Plus                 |                                     |
|                 | mg/dl       | 4.59   | 3.67 | 5.51 | 0.46  | 0.92  |                                       |                                     |
|                 | µmol/l      | 384    | 307  | 461  | 38.50 | 77.00 | Jaffe rate blanked comp. (-26 µmol/l) |                                     |
|                 | mg/dl       | 4.34   | 3.47 | 5.21 | 0.44  | 0.87  |                                       |                                     |

## COBAS INTEGRA®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|------|------|-------|-------|---|
| Creatinine        | µmol/l | 380    | 304  | 456  | 38.00 | 76.00 | Jaffe rate blanked compensated (-18 µmol/l)         |
|                   | mg/dl  | 4.29   | 3.44 | 5.14 | 0.43  | 0.85  |   |
| gamma-GT          | U/l    | 151    | 129  | 173  | 11.00 | 22.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                   | U/l    | 119    | 102  | 136  | 8.50  | 17.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                   | U/l    | 93     | 80   | 106  | 6.50  | 13.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                   | U/l    | 165    | 140  | 190  | 12.50 | 25.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                   | U/l    | 130    | 110  | 150  | 10.00 | 20.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                   | U/l    | 102    | 86   | 118  | 8.00  | 16.00 | 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 |   |
| HDL - Cholesterol | mmol/l | 3.02   | 2.56 | 3.48 | 0.23  | 0.46  | Direct HDL Roche 4th Generation                     |
|                   | mg/dl  | 117    | 98.8 | 135  | 9.10  | 18.20 |   |
| Iron              | µmol/l | 38.0   | 31.2 | 44.8 | 3.40  | 6.80  | Colorimetric with ppt.                              |
|                   | µg/dl  | 212    | 174  | 250  | 19.00 | 38.00 |   |
|                   | µmol/l | 37.1   | 30.4 | 43.8 | 3.35  | 6.70  | Colorimetric without ppt.                           |
|                   | µg/dl  | 207    | 170  | 244  | 18.50 | 37.00 |   |
| Lactate           | mmol/l | 5.31   | 4.36 | 6.26 | 0.48  | 0.95  | Colorimetric Lactate Oxidase                        |
|                   | mg/dl  | 47.8   | 39.3 | 56.3 | 4.25  | 8.50  |   |
| LD (LDH)          | U/l    | 354    | 301  | 407  | 26.50 | 53.00 | L->P IFCC 37°C                                      |
|                   | U/l    | 256    | 217  | 295  | 19.50 | 39.00 | L->P IFCC 30°C                                      |
|                   | U/l    | 179    | 153  | 205  | 13.00 | 26.00 | L->P IFCC 25°C                                      |
| Lipase            | U/l    | 74     | 60   | 88   | 7.00  | 14.00 | Roche Colorimetric 37°C                             |
| Magnesium         | mmol/l | 1.83   | 1.61 | 2.05 | 0.11  | 0.22  | Xylidyl Blue  |
|                   | mg/dl  | 4.45   | 3.91 | 4.99 | 0.27  | 0.54  |   |
|                   | mmol/l | 1.82   | 1.60 | 2.04 | 0.11  | 0.22  | Chlorphosphonazo III                                |
|                   | mg/dl  | 4.42   | 3.89 | 4.95 | 0.27  | 0.53  |   |

## COBAS INTEGRA®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods                                   |
|---------------------|--------|--------|------|------|-------|-------|---|
| Phosphate Inorganic | mmol/l | 2.42   | 2.06 | 2.78 | 0.18  | 0.36  | Phosphomolybdate enzymatic                |
|                     | mg/dl  | 7.50   | 6.39 | 8.61 | 0.56  | 1.11  |   |
|                     | mmol/l | 2.41   | 2.05 | 2.77 | 0.18  | 0.36  | Phosphomolybdate UV                       |
|                     | mg/dl  | 7.47   | 6.36 | 8.58 | 0.56  | 1.11  |   |
| Potassium           | mmol/l | 6.03   | 5.55 | 6.51 | 0.24  | 0.48  | ISE method - indirect                     |
| Protein Total       | g/l    | 43.2   | 34.6 | 51.8 | 4.30  | 8.60  | Biuret reaction end point                 |
|                     | g/dl   | 4.32   | 3.46 | 5.18 | 0.43  | 0.86  |   |
| Sodium              | mmol/l | 156    | 149  | 163  | 3.50  | 7.00  | ISE method - indirect                     |
| TIBC                | µmol/l | 39.9   | 31.6 | 48.2 | 4.15  | 8.30  | FE+UIBC(saturation with iron)             |
|                     | µg/dl  | 223    | 177  | 269  | 23.00 | 46.00 |   |
| Triglycerides       | mmol/l | 2.91   | 2.45 | 3.37 | 0.23  | 0.46  | Lipase/GPO-PAP no correction              |
|                     | mg/dl  | 258    | 217  | 299  | 20.50 | 41.00 |   |
| Uric Acid (Urate)   | 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 | 0.55   | 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  |   |
| 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  | 53.0   | 45.1 | 60.9 | 3.95  | 7.90  |   |

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                              |
|----------------------|--------|--------|------|------|-------|-------|--------------------------------------|
| Albumin              | g/l    | 31.9   | 27.1 | 36.7 | 2.40  | 4.80  | Bromocresol Green                    |
|                      | g/dl   | 3.19   | 2.71 | 3.67 | 0.24  | 0.48  |                                      |
| Alkaline Phosphatase | U/l    | 472    | 401  | 543  | 35.50 | 71.00 | Diethanolamine buffer DEA 37°C       |
| ALT (GPT)            | U/l    | 141    | 112  | 170  | 14.50 | 29.00 | Tris buffer without P5P 37°C         |
| AST (GOT)            | U/l    | 152    | 121  | 183  | 15.50 | 31.00 | Tris buffer without P5P 37°C         |
| Cholesterol          | mmol/l | 7.36   | 6.41 | 8.31 | 0.48  | 0.95  | Cholesterol Oxidase - Abell Kendall  |
|                      | mg/dl  | 284    | 247  | 321  | 18.50 | 37.00 |                                      |
| 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  |                                      |
| Glucose              | mmol/l | 16.1   | 13.6 | 18.6 | 1.25  | 2.50  | Glucose oxidase                      |
|                      | mg/dl  | 290    | 245  | 335  | 22.50 | 45.00 |                                      |
| Phosphate Inorganic  | mmol/l | 2.39   | 2.03 | 2.75 | 0.18  | 0.36  | Phosphomolybdate UV                  |
|                      | mg/dl  | 7.41   | 6.29 | 8.53 | 0.56  | 1.12  |                                      |
| 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 |                                      |
| Urea                 | mmol/l | 18.1   | 15.4 | 20.8 | 1.35  | 2.70  | Urease kinetic                       |
|                      | mg/dl  | 109    | 92.6 | 125  | 8.20  | 16.40 |                                      |
|                      | mmol/l | 18.1   | 15.4 | 20.8 | 1.35  | 2.70  | BUN                                  |
|                      | mg/dl  | 50.8   | 43.2 | 58.4 | 3.80  | 7.60  |                                      |



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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

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  |                                     |
| Alkaline Phosphatase | U/l    | 340    | 289  | 391  | 25.50 | 51.00 | AMP optimised to IFCC 37°C          |
|                      | U/l    | 265    | 225  | 305  | 20.00 | 40.00 | AMP optimised to IFCC 30°C          |
|                      | U/l    | 217    | 185  | 249  | 16.00 | 32.00 | AMP optimised to IFCC 25°C          |
| ALT (GPT)            | U/l    | 154    | 123  | 185  | 15.50 | 31.00 | Tris buffer without P5P 37°C        |
|                      | U/l    | 114    | 91   | 137  | 11.50 | 23.00 | Tris buffer without P5P 30°C        |
|                      | U/l    | 87     | 69   | 105  | 9.00  | 18.00 | Tris buffer without P5P 25°C        |
| AST (GOT)            | U/l    | 158    | 126  | 190  | 16.00 | 32.00 | Tris buffer without P5P 37°C        |
|                      | U/l    | 107    | 85   | 129  | 11.00 | 22.00 | Tris buffer without P5P 30°C        |
|                      | U/l    | 75     | 60   | 90   | 7.50  | 15.00 | Tris buffer without P5P 25°C        |
| Bilirubin Total      | µmol/l | 88.9   | 70.2 | 108  | 9.35  | 18.70 | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 5.20   | 4.11 | 6.29 | 0.55  | 1.09  |                                     |
|                      | µmol/l | 86.9   | 68.6 | 105  | 9.15  | 18.30 | Nitrobenzenediazonium salt          |
|                      | mg/dl  | 5.08   | 4.01 | 6.15 | 0.54  | 1.07  |                                     |
| Calcium              | mmol/l | 3.20   | 2.88 | 3.52 | 0.16  | 0.32  | Arsenazo III                        |
|                      | mg/dl  | 12.8   | 11.5 | 14.1 | 0.65  | 1.30  |                                     |
| Cholesterol          | mmol/l | 7.11   | 6.19 | 8.03 | 0.46  | 0.92  | Cholesterol Oxidase - Abell Kendall |
|                      | mg/dl  | 274    | 239  | 309  | 17.50 | 35.00 |                                     |
| Chloride             | mmol/l | 114    | 105  | 123  | 4.50  | 9.00  | ISE direct                          |
| CK Total             | U/l    | 518    | 425  | 611  | 46.50 | 93.00 | CK-NAC (IFCC) 37°C                  |
|                      | U/l    | 324    | 266  | 382  | 29.00 | 58.00 | CK-NAC (IFCC) 30°C                  |
|                      | U/l    | 220    | 181  | 259  | 19.50 | 39.00 | CK-NAC (IFCC) 25°C                  |


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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|------|------|-------|-------|---|
| gamma-GT            | U/l    | 156    | 133  | 179  | 11.50 | 23.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                     | U/l    | 123    | 105  | 141  | 9.00  | 18.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                     | U/l    | 96     | 82   | 110  | 7.00  | 14.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°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 | 15.4   | 13.0 | 17.8 | 1.20  | 2.40  | Glucose oxidase                                     |
|                     | mg/dl  | 278    | 234  | 322  | 22.00 | 44.00 |   |
| Iron                | µmol/l | 38.9   | 31.9 | 45.9 | 3.50  | 7.00  | Colorimetric without ppt.                           |
|                     | µg/dl  | 217    | 178  | 256  | 19.50 | 39.00 |   |
| Magnesium           | mmol/l | 1.86   | 1.64 | 2.08 | 0.11  | 0.22  | Xylidyl Blue  |
|                     | mg/dl  | 4.52   | 3.99 | 5.05 | 0.27  | 0.53  |   |
| 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 | 5.89   | 5.42 | 6.36 | 0.24  | 0.47  | ISE method - direct                                 |
| Protein Total       | g/l    | 46.2   | 36.9 | 55.5 | 4.65  | 9.30  | Biuret reaction end point                           |
|                     | g/dl   | 4.62   | 3.69 | 5.55 | 0.47  | 0.93  |   |
| Sodium              | mmol/l | 153    | 145  | 161  | 4.00  | 8.00  | 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 | 0.57   | 0.50 | 0.65 | 0.04  | 0.08  | Uricase peroxidase with ascorbate oxidase           |
|                     | mg/dl  | 9.63   | 8.37 | 10.9 | 0.63  | 1.26  |   |
| Urea                | mmol/l | 18.1   | 15.4 | 20.8 | 1.35  | 2.70  | Urease kinetic                                      |
|                     | mg/dl  | 109    | 92.6 | 125  | 8.20  | 16.40 |   |



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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte | unit   | Target | low  | high | 1SD  | 2SD  | methods |
|---------|--------|--------|------|------|------|------|---------|
| Urea    | mmol/l | 18.1   | 15.4 | 20.8 | 1.35 | 2.70 | BUN     |
|         | mg/dl  | 50.8   | 43.2 | 58.4 | 3.80 | 7.60 |         |

## Ortho VITROS®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte                           | unit   | Target | low  | high | 1SD   | 2SD   | methods                                    |
|-----------------------------------|--------|--------|------|------|-------|-------|--|
| Albumin                           | g/l    | 29.1   | 24.8 | 33.4 | 2.15  | 4.30  | Ortho Vitros Microslide Systems            |
|                                   | g/dl   | 2.91   | 2.48 | 3.34 | 0.22  | 0.43  |  |
| Alkaline Phosphatase              | U/l    | 273    | 232  | 314  | 20.50 | 41.00 | Ortho Vitros Microslide Systems 37°C       |
| ALT (GPT)                         | U/l    | 138    | 111  | 165  | 13.50 | 27.00 | Ortho Vitros Microslide Systems 37°C       |
|                                   | U/l    | 135    | 108  | 162  | 13.50 | 27.00 | Ortho Vitros MicroSlide visible 37°C       |
| Amylase Total                     | U/l    | 172    | 146  | 198  | 13.00 | 26.00 | Ortho Vitros Microslide Systems 37°C       |
| AST (GOT)                         | U/l    | 180    | 144  | 216  | 18.00 | 36.00 | Ortho Vitros Microslide visible slide 37°C |
| Bilirubin Total                   | µmol/l | 81.9   | 64.7 | 99.1 | 8.60  | 17.20 | Vitros 250/500/700/950 Total Bilirubin     |
|                                   | mg/dl  | 4.79   | 3.78 | 5.80 | 0.51  | 1.01  |  |
| Bilirubin, Unconjugated Vitros BU | µmol/l | 79.0   | 62.4 | 95.6 | 8.30  | 16.60 | BuBc Vitros Slide                          |
|                                   | mg/dl  | 4.62   | 3.65 | 5.59 | 0.49  | 0.97  |  |
| 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 | 6.84   | 5.95 | 7.73 | 0.45  | 0.89  | Ortho Vitros Microslide Systems            |
|                                   | mg/dl  | 264    | 230  | 298  | 17.00 | 34.00 |  |
| Chloride                          | mmol/l | 114    | 105  | 123  | 4.50  | 9.00  | Ortho Vitros Microslide Systems            |
| CK Total                          | U/l    | 423    | 347  | 499  | 38.00 | 76.00 | Ortho Vitros Microslide Systems 37°C       |
| Creatinine                        | µmol/l | 397    | 318  | 476  | 39.50 | 79.00 | Vitros IDMS Traceable                      |
|                                   | mg/dl  | 4.49   | 3.59 | 5.39 | 0.45  | 0.90  |  |
| gamma-GT                          | U/l    | 194    | 165  | 223  | 14.50 | 29.00 | Ortho Vitros Microslide Systems 37°C       |
| Glucose                           | mmol/l | 14.9   | 12.7 | 17.1 | 1.10  | 2.20  | Ortho Vitros Microslide Systems            |
|                                   | mg/dl  | 268    | 229  | 307  | 19.50 | 39.00 |  |

## Ortho VITROS®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD    | methods  |
|---------------------|--------|--------|------|------|-------|--------|--|
| HDL - Cholesterol   | mmol/l | 2.49   | 2.12 | 2.86 | 0.19  | 0.37   | Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation |
|                     | mg/dl  | 96.1   | 81.8 | 110  | 7.15  | 14.30  |  |
| Iron                | µmol/l | 34.4   | 28.2 | 40.6 | 3.10  | 6.20   | Ortho Vitros Microslide Systems                        |
|                     | µg/dl  | 192    | 158  | 226  | 17.00 | 34.00  |  |
| Lactate             | mmol/l | 4.87   | 3.99 | 5.75 | 0.44  | 0.88   | Ortho Vitros Microslide Systems                        |
|                     | mg/dl  | 43.9   | 35.9 | 51.9 | 4.00  | 8.00   |  |
| LD (LDH)            | U/l    | 361    | 307  | 415  | 27.00 | 54.00  | Ortho Vitros IFCC Traceable 37°C                       |
| Lipase              | U/l    | 833    | 668  | 998  | 82.50 | 165.00 | Ortho Vitros Microslide Systems 37°C                   |
| Magnesium           | mmol/l | 1.86   | 1.64 | 2.08 | 0.11  | 0.22   | Ortho Vitros Microslide Systems                        |
|                     | mg/dl  | 4.52   | 3.99 | 5.05 | 0.27  | 0.53   |  |
| Phosphate Inorganic | mmol/l | 2.37   | 2.01 | 2.73 | 0.18  | 0.36   | Ortho Vitros Microslide Systems                        |
|                     | mg/dl  | 7.35   | 6.23 | 8.47 | 0.56  | 1.12   |  |
| Potassium           | mmol/l | 5.95   | 5.47 | 6.43 | 0.24  | 0.48   | Ortho Vitros Microslide Systems                        |
| Protein Total       | g/l    | 47.0   | 37.6 | 56.4 | 4.70  | 9.40   | Ortho Vitros Microslide Systems                        |
|                     | g/dl   | 4.70   | 3.76 | 5.64 | 0.47  | 0.94   |  |
| Sodium              | mmol/l | 155    | 147  | 163  | 4.00  | 8.00   | Ortho Vitros Microslide Systems                        |
| Triglycerides       | mmol/l | 3.26   | 2.74 | 3.78 | 0.26  | 0.52   | Ortho Vitros Microslide Systems                        |
|                     | mg/dl  | 289    | 242  | 336  | 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  | 8.70   | 7.58 | 9.82 | 0.56  | 1.12   |  |
| Urea                | mmol/l | 18.3   | 15.5 | 21.1 | 1.40  | 2.80   | Ortho Vitros Microslide Systems                        |
|                     | mg/dl  | 110    | 93.2 | 127  | 8.40  | 16.80  |  |
|                     | mmol/l | 18.3   | 15.6 | 21.0 | 1.35  | 2.70   | BUN  |
|                     | mg/dl  | 51.4   | 43.7 | 59.1 | 3.85  | 7.70   |  |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                           |
|----------------------|--------|--------|------|------|-------|-------|-----------------------------------|
| Albumin              | g/l    | 31.0   | 26.3 | 35.7 | 2.35  | 4.70  | Bromocresol Green                 |
|                      | g/dl   | 3.10   | 2.63 | 3.57 | 0.24  | 0.47  |                                   |
|                      | g/l    | 26.8   | 22.8 | 30.8 | 2.00  | 4.00  | Turbidimetric Assays              |
|                      | g/dl   | 2.68   | 2.28 | 3.08 | 0.20  | 0.40  |                                   |
| Alkaline Phosphatase | U/l    | 322    | 274  | 370  | 24.00 | 48.00 | Roche Integra AMP buffer 37°C     |
|                      | U/l    | 251    | 213  | 289  | 19.00 | 38.00 | Roche Integra AMP buffer 30°C     |
|                      | U/l    | 206    | 175  | 237  | 15.50 | 31.00 | Roche Integra AMP buffer 25°C     |
| ALT (GPT)            | U/l    | 135    | 108  | 162  | 13.50 | 27.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 100    | 80   | 120  | 10.00 | 20.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 76     | 61   | 91   | 7.50  | 15.00 | Tris buffer without P5P 25°C      |
| Amylase Pancreatic   | U/l    | 239    | 203  | 275  | 18.00 | 36.00 | Roche EPS Liquid 37°C             |
| Amylase Total        | U/l    | 258    | 219  | 297  | 19.50 | 39.00 | Roche Integra 2-chloro-pNPG7 37°C |
|                      | U/l    | 257    | 218  | 296  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C    |
| AST (GOT)            | U/l    | 136    | 109  | 163  | 13.50 | 27.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 92     | 74   | 110  | 9.00  | 18.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 65     | 52   | 78   | 6.50  | 13.00 | Tris buffer without P5P 25°C      |
| Bile Acids           | µmol/l | 40.2   | 32.2 | 48.2 | 4.00  | 8.00  | Enzymatic Colorimetric            |
| Bicarbonate          | mmol/l | 14.2   | 11.2 | 17.2 | 1.50  | 3.00  | Colorimetric                      |
|                      | mmol/l | 13.6   | 10.7 | 16.5 | 1.45  | 2.90  | Enzymatic                         |
| Bilirubin Direct     | µmol/l | 29.2   | 23.0 | 35.4 | 3.10  | 6.20  | Dichlorophenyl Diazonium (DPD)    |
|                      | mg/dl  | 1.71   | 1.35 | 2.07 | 0.18  | 0.36  |                                   |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte          | unit   | Target | low  | high | 1SD    | 2SD      | methods                              |
|------------------|--------|--------|------|------|--------|----------|--------------------------------------|
| Bilirubin Direct | µmol/l | 30.7   | 24.3 | 37.1 | 3.20   | 6.40     | Diazo with Sulphanilic Acid          |
|                  | mg/dl  | 1.80   | 1.42 | 2.18 | 0.19   | 0.38     |                                      |
|                  | µmol/l | 29.2   | 23.1 | 35.3 | 3.05   | 6.10     | Roche DPD JG standardised            |
|                  | mg/dl  | 1.71   | 1.35 | 2.07 | 0.18   | 0.36     |                                      |
| Bilirubin Total  | µmol/l | 77.9   | 61.6 | 94.2 | 8.15   | 16.30    | Diazo with Sulphanilic Acid          |
|                  | mg/dl  | 4.56   | 3.60 | 5.52 | 0.48   | 0.96     |                                      |
|                  | µmol/l | 79.1   | 62.5 | 95.7 | 8.30   | 16.60    | Dichlorophenyl Diazonium (DPD)       |
|                  | mg/dl  | 4.63   | 3.66 | 5.60 | 0.49   | 0.97     |                                      |
| Calcium          | µmol/l | 78.6   | 62.1 | 95.1 | 8.25   | 16.50    | Diazonium ion                        |
|                  | mg/dl  | 4.60   | 3.63 | 5.57 | 0.49   | 0.97     |                                      |
|                  | mmol/l | 3.07   | 2.77 | 3.37 | 0.15   | 0.30     | Cresolphthalein complexone           |
|                  |        | 12.3   | 11.1 | 13.5 | 0.60   | 1.20     |                                      |
| mg/dl            | 3.08   | 2.77   | 3.39 | 0.16 | 0.31   | NM-BAPTA |                                      |
|                  | 12.3   | 11.1   | 13.5 | 0.60 | 1.20   |          |                                      |
| Cholesterol      | mmol/l | 7.16   | 6.23 | 8.09 | 0.47   | 0.93     | Cholesterol Oxidase - Abell Kendall  |
|                  | mg/dl  | 276    | 240  | 312  | 18.00  | 36.00    |                                      |
|                  | mmol/l | 7.21   | 6.28 | 8.14 | 0.47   | 0.93     | Cholesterol Oxidase - IDMS           |
|                  | mg/dl  | 278    | 242  | 314  | 18.00  | 36.00    |                                      |
| Chloride         | mmol/l | 110    | 101  | 119  | 4.50   | 9.00     | ISE indirect                         |
| Cholinesterase   | U/l    | 5066   | 4053 | 6079 | 506.50 | 1013.00  | Colorimetric Butyrylthiocholine 37°C |
| CK Total         | U/l    | 529    | 434  | 624  | 47.50  | 95.00    | CK-NAC substrate start (DGKC) 37°C   |
|                  | U/l    | 331    | 272  | 390  | 29.50  | 59.00    | CK-NAC substrate start (DGKC) 30°C   |
|                  | U/l    | 225    | 184  | 266  | 20.50  | 41.00    | CK-NAC substrate start (DGKC) 25°C   |
|                  | U/l    | 512    | 420  | 604  | 46.00  | 92.00    | CK-NAC (IFCC) 37°C                   |
|                  | U/l    | 321    | 263  | 379  | 29.00  | 58.00    | CK-NAC (IFCC) 30°C                   |
|                  | U/l    | 218    | 179  | 257  | 19.50  | 39.00    | CK-NAC (IFCC) 25°C                   |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit   | Target | low  | high  | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|------|-------|-------|---|---|
| Creatinine          | µmol/l | 398    | 319  | 477   | 39.50 | 79.00                                       | Alkaline picrate no deproteinization                |
|                     | mg/dl  | 4.50   | 3.60 | 5.40  | 0.45  | 0.90  |   |
|                     | µmol/l | 409    | 327  | 491   | 41.00 | 82.00                                       | Roche Creatinine Plus                               |
|                     | mg/dl  | 4.62   | 3.70 | 5.54  | 0.46  | 0.92  |   |
|                     | µmol/l | 394    | 315  | 473   | 39.50 | 79.00                                       | Jaffe rate blanked comp. (-26 µmol/l)               |
|                     | mg/dl  | 4.45   | 3.56 | 5.34  | 0.45  | 0.89  |   |
| µmol/l              | 393    | 314    | 472  | 39.50 | 79.00 | Jaffe rate blanked compensated (-18 µmol/l) |   |
| mg/dl               | 4.44   | 3.55   | 5.33 | 0.45  | 0.89  |   |   |
| D-3-Hydroxybutyrate | mmol/l | 1.08   | 0.92 | 1.24  | 0.08  | 0.16  | Tris buffer 100mmol pH 8.5                          |
| gamma-GT            | U/l    | 147    | 125  | 169   | 11.00 | 22.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                     | U/l    | 116    | 99   | 133   | 8.50  | 17.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                     | U/l    | 91     | 77   | 105   | 7.00  | 14.00                                       | 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 |
| GLDH                | U/l    | 28     | 22   | 34    | 3.00  | 6.00  | Triethanolamine buffer 50 mmol 37°C                 |
|                     | U/l    | 22     | 17   | 27    | 2.50  | 5.00  | Triethanolamine buffer 50 mmol 30°C                 |
|                     | U/l    | 17     | 14   | 20    | 1.50  | 3.00  | Triethanolamine buffer 50 mmol 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                                       |   |
| HDL - Cholesterol   | mmol/l | 2.93   | 2.49 | 3.37  | 0.22  | 0.44  | Direct HDL Roche 4th Generation                     |
|                     | mg/dl  | 113    | 96.1 | 130   | 8.45  | 16.90                                       |   |
| Iron                | µmol/l | 37.0   | 30.3 | 43.7  | 3.35  | 6.70  | Colorimetric with ppt.                              |
|                     | µg/dl  | 207    | 169  | 245   | 19.00 | 38.00                                       |   |



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit    | Target | low  | high | 1SD   | 2SD   | methods                      |
|---------------------|---------|--------|------|------|-------|-------|------------------------------|
| Iron                | µmol/l  | 36.9   | 30.2 | 43.6 | 3.35  | 6.70  | Colorimetric without ppt.    |
|                     | µg/dl   | 206    | 169  | 243  | 18.50 | 37.00 |                              |
| Lactate             | mmol/l  | 5.30   | 4.35 | 6.25 | 0.48  | 0.95  | Colorimetric Lactate Oxidase |
|                     | mg/dl   | 47.8   | 39.2 | 56.4 | 4.30  | 8.60  |                              |
| LD (LDH)            | U/l     | 345    | 294  | 396  | 25.50 | 51.00 | L->P 37°C                    |
|                     | U/l     | 249    | 212  | 286  | 18.50 | 37.00 | L->P 30°C                    |
|                     | U/l     | 175    | 149  | 201  | 13.00 | 26.00 | L->P 25°C                    |
|                     | 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     | 78     | 63   | 93   | 7.50  | 15.00 | Roche Colorimetric 37°C      |
| Lithium             | mmol/l  | 1.99   | 1.75 | 2.23 | 0.12  | 0.24  | Spectrophotometric           |
|                     | mg/dl   | 1.38   | 1.22 | 1.54 | 0.08  | 0.16  |                              |
| Magnesium           | mmol/l  | 1.84   | 1.62 | 2.06 | 0.11  | 0.22  | Xylidyl Blue                 |
|                     | mg/dl   | 4.47   | 3.94 | 5.00 | 0.27  | 0.53  |                              |
|                     | mmol/l  | 1.85   | 1.63 | 2.07 | 0.11  | 0.22  | Chlorphosphonazo III         |
|                     | mg/dl   | 4.50   | 3.96 | 5.04 | 0.27  | 0.54  |                              |
| Osmolality          | mOsm/kg | 345    | 276  | 414  | 34.50 | 69.00 | Calculated                   |
| Phosphate Inorganic | mmol/l  | 2.32   | 1.97 | 2.67 | 0.18  | 0.35  | Phosphomolybdate enzymatic   |
|                     | mg/dl   | 7.19   | 6.11 | 8.27 | 0.54  | 1.08  |                              |
|                     | mmol/l  | 2.34   | 1.99 | 2.69 | 0.18  | 0.35  | Phosphomolybdate UV          |
|                     | mg/dl   | 7.25   | 6.17 | 8.33 | 0.54  | 1.08  |                              |
| Potassium           | mmol/l  | 6.11   | 5.62 | 6.60 | 0.25  | 0.49  | ISE method - indirect        |
| Protein Total       | g/l     | 44.9   | 36.0 | 53.8 | 4.45  | 8.90  | Biuret reaction end point    |
|                     | g/dl    | 4.49   | 3.60 | 5.38 | 0.45  | 0.89  |                              |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte                     | unit    | Target | low  | high | 1SD   | 2SD   | methods   |
|-----------------------------|---------|--------|------|------|-------|-------|---|
| Protein Total               | g/l     | 45.1   | 36.1 | 54.1 | 4.50  | 9.00  | Biuret reaction kinetic                           |
|                             | g/dl    | 4.51   | 3.61 | 5.41 | 0.45  | 0.90  |   |
| PSA Total                   | ng/ml = | 19.5   | 14.7 | 24.3 | 2.40  | 4.80  | Roche Cobas 6000/8000                             |
| Sodium                      | mmol/l  | 158    | 150  | 166  | 4.00  | 8.00  | ISE method - indirect                             |
| Thyroid Stimulating Hormone | µU/ml = | 1.55   | 1.24 | 1.86 | 0.16  | 0.31  | Roche Cobas e601/602                              |
| TIBC                        | µmol/l  | 39.2   | 30.9 | 47.5 | 4.15  | 8.30  | FE+UIBC(saturation with iron)                     |
|                             | µg/dl   | 219    | 173  | 265  | 23.00 | 46.00 |   |
|                             | µmol/l  | 44.9   | 35.5 | 54.3 | 4.70  | 9.40  | Calculated from Transferrin                       |
|                             | µg/dl   | 251    | 198  | 304  | 26.50 | 53.00 |   |
| Triglycerides               | mmol/l  | 2.90   | 2.43 | 3.37 | 0.24  | 0.47  | Lipase/GPO-PAP no correction                      |
|                             | mg/dl   | 257    | 215  | 299  | 21.00 | 42.00 |   |
|                             | 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 |   |
| Uric Acid (Urate)           | mmol/l  | 0.54   | 0.47 | 0.61 | 0.03  | 0.07  | Uricase peroxidase with ascorbate oxidase         |
|                             | mg/dl   | 9.00   | 7.85 | 10.2 | 0.58  | 1.15  |   |
|                             | mmol/l  | 0.54   | 0.47 | 0.61 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                             | mg/dl   | 8.99   | 7.81 | 10.2 | 0.59  | 1.18  |   |
|                             | mmol/l  | 0.54   | 0.47 | 0.61 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                             | mg/dl   | 8.99   | 7.81 | 10.2 | 0.59  | 1.18  |   |
| Urea                        | 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  |   |

## Roche Cobas C111®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                        |
|----------------------|--------|--------|------|------|-------|-------|--------------------------------|
| Albumin              | g/l    | 31.7   | 26.9 | 36.5 | 2.40  | 4.80  | Bromocresol Green              |
|                      | g/dl   | 3.17   | 2.69 | 3.65 | 0.24  | 0.48  |                                |
| Alkaline Phosphatase | U/l    | 326    | 277  | 375  | 24.50 | 49.00 | Roche Integra AMP buffer 37°C  |
|                      | U/l    | 254    | 216  | 292  | 19.00 | 38.00 | Roche Integra AMP buffer 30°C  |
|                      | U/l    | 208    | 177  | 239  | 15.50 | 31.00 | 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 Total        | U/l    | 265    | 225  | 305  | 20.00 | 40.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT)            | U/l    | 135    | 108  | 162  | 13.50 | 27.00 | Tris buffer without P5P 37°C   |
|                      | U/l    | 91     | 73   | 109  | 9.00  | 18.00 | Tris buffer without P5P 30°C   |
|                      | U/l    | 64     | 51   | 77   | 6.50  | 13.00 | Tris buffer without P5P 25°C   |
| Bilirubin Direct     | µmol/l | 30.5   | 24.1 | 36.9 | 3.20  | 6.40  | Dichlorophenyl Diazonium (DPD) |
|                      | mg/dl  | 1.78   | 1.41 | 2.15 | 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  |                                |
| Bilirubin Total      | µmol/l | 79.9   | 63.1 | 96.7 | 8.40  | 16.80 | Diazo with Sulphanilic Acid    |
|                      | mg/dl  | 4.67   | 3.69 | 5.65 | 0.49  | 0.98  |                                |
|                      | µmol/l | 80.0   | 63.2 | 96.8 | 8.40  | 16.80 | Dichlorophenyl Diazonium (DPD) |
|                      | mg/dl  | 4.68   | 3.70 | 5.66 | 0.49  | 0.98  |                                |
|                      | µmol/l | 82.0   | 64.8 | 99.2 | 8.60  | 17.20 | Diazonium ion                  |
|                      | mg/dl  | 4.80   | 3.79 | 5.81 | 0.51  | 1.01  |                                |

## Roche Cobas C111®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods                             |
|---------------------|--------|--------|------|------|-------|-------|-------------------------------------|
| Calcium             | mmol/l | 3.08   | 2.78 | 3.38 | 0.15  | 0.30  | NM-BAPTA                            |
|                     | mg/dl  | 12.3   | 11.1 | 13.5 | 0.60  | 1.20  |                                     |
| Cholesterol         | mmol/l | 7.05   | 6.13 | 7.97 | 0.46  | 0.92  | Cholesterol Oxidase - Abell Kendall |
|                     | mg/dl  | 272    | 237  | 307  | 17.50 | 35.00 |                                     |
|                     | mmol/l | 7.02   | 6.11 | 7.93 | 0.46  | 0.91  | Cholesterol Oxidase - IDMS          |
|                     | mg/dl  | 271    | 236  | 306  | 17.50 | 35.00 |                                     |
| 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 | 402    | 321  | 483  | 40.50 | 81.00 | Roche Creatinine Plus               |
|                     | mg/dl  | 4.54   | 3.63 | 5.45 | 0.46  | 0.91  |                                     |
| Glucose             | mmol/l | 16.0   | 13.6 | 18.4 | 1.20  | 2.40  | Hexokinase                          |
|                     | mg/dl  | 288    | 245  | 331  | 21.50 | 43.00 |                                     |
| HDL - Cholesterol   | mmol/l | 2.97   | 2.53 | 3.41 | 0.22  | 0.44  | Direct HDL Roche 4th Generation     |
|                     | mg/dl  | 115    | 97.7 | 132  | 8.65  | 17.30 |                                     |
| LD (LDH)            | U/l    | 347    | 295  | 399  | 26.00 | 52.00 | L->P IFCC 37°C                      |
|                     | U/l    | 251    | 213  | 289  | 19.00 | 38.00 | L->P IFCC 30°C                      |
|                     | U/l    | 176    | 150  | 202  | 13.00 | 26.00 | L->P IFCC 25°C                      |
| 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  |                                     |
| Protein Total       | g/l    | 45.5   | 36.4 | 54.6 | 4.55  | 9.10  | Biuret reaction end point           |
|                     | g/dl   | 4.55   | 3.64 | 5.46 | 0.46  | 0.91  |                                     |
| Triglycerides       | mmol/l | 2.91   | 2.44 | 3.38 | 0.24  | 0.47  | Lipase/GPO-PAP no correction        |
|                     | mg/dl  | 258    | 216  | 300  | 21.00 | 42.00 |                                     |

## Roche Cobas C111®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### 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         |
|                   | mg/dl  | 9.26   | 8.05 | 10.5 | 0.61 | 1.21  |   |
|                   | mmol/l | 0.55   | 0.47 | 0.62 | 0.04 | 0.07  | Uricase peroxidase no 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 with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.27   | 8.06 | 10.5 | 0.61 | 1.21  |   |
| 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  |   |

## Roche Cobas C311®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                        |
|----------------------|--------|--------|------|------|-------|-------|--------------------------------|
| Albumin              | g/l    | 30.9   | 26.2 | 35.6 | 2.35  | 4.70  | Bromocresol Green              |
|                      | g/dl   | 3.09   | 2.62 | 3.56 | 0.24  | 0.47  |                                |
| Alkaline Phosphatase | U/l    | 319    | 271  | 367  | 24.00 | 48.00 | Roche Integra AMP buffer 37°C  |
|                      | U/l    | 249    | 211  | 287  | 19.00 | 38.00 | Roche Integra AMP buffer 30°C  |
|                      | U/l    | 204    | 173  | 235  | 15.50 | 31.00 | Roche Integra AMP buffer 25°C  |
| ALT (GPT)            | U/l    | 135    | 108  | 162  | 13.50 | 27.00 | Tris buffer without P5P 37°C   |
|                      | U/l    | 100    | 80   | 120  | 10.00 | 20.00 | Tris buffer without P5P 30°C   |
|                      | U/l    | 76     | 61   | 91   | 7.50  | 15.00 | Tris buffer without P5P 25°C   |
| Amylase Total        | U/l    | 261    | 222  | 300  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT)            | U/l    | 135    | 108  | 162  | 13.50 | 27.00 | Tris buffer without P5P 37°C   |
|                      | U/l    | 91     | 73   | 109  | 9.00  | 18.00 | Tris buffer without P5P 30°C   |
|                      | U/l    | 64     | 51   | 77   | 6.50  | 13.00 | Tris buffer without P5P 25°C   |
| Bicarbonate          | mmol/l | 13.2   | 10.4 | 16.0 | 1.40  | 2.80  | Enzymatic                      |
| Bilirubin Direct     | µmol/l | 28.4   | 22.4 | 34.4 | 3.00  | 6.00  | Dichlorophenyl Diazonium (DPD) |
|                      | mg/dl  | 1.66   | 1.31 | 2.01 | 0.18  | 0.35  |                                |
|                      | µmol/l | 29.6   | 23.3 | 35.9 | 3.15  | 6.30  | Diazo with Sulphanilic Acid    |
|                      | mg/dl  | 1.73   | 1.36 | 2.10 | 0.19  | 0.37  |                                |
|                      | µmol/l | 28.9   | 22.9 | 34.9 | 3.00  | 6.00  | Roche DPD JG standardised      |
|                      | mg/dl  | 1.69   | 1.34 | 2.04 | 0.18  | 0.35  |                                |
| Bilirubin Total      | µmol/l | 81.5   | 64.4 | 98.6 | 8.55  | 17.10 | Diazo with Sulphanilic Acid    |
|                      | mg/dl  | 4.77   | 3.77 | 5.77 | 0.50  | 1.00  |                                |

## Roche Cobas C311®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte         | unit   | Target | low  | high | 1SD   | 2SD   | methods                                       |
|-----------------|--------|--------|------|------|-------|-------|---|
| Bilirubin Total | µmol/l | 79.5   | 62.8 | 96.2 | 8.35  | 16.70 | Dichlorophenyl Diazonium (DPD)                |
|                 | mg/dl  | 4.65   | 3.67 | 5.63 | 0.49  | 0.98  |   |
|                 | µmol/l | 78.7   | 62.2 | 95.2 | 8.25  | 16.50 | Diazonium ion                                 |
|                 | mg/dl  | 4.60   | 3.64 | 5.56 | 0.48  | 0.96  |   |
| 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 | 3.09   | 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 | 7.23   | 6.29 | 8.17 | 0.47  | 0.94  | Cholesterol Oxidase - Abell Kendall           |
|                 | mg/dl  | 279    | 243  | 315  | 18.00 | 36.00 |   |
|                 | mmol/l | 7.21   | 6.27 | 8.15 | 0.47  | 0.94  | Cholesterol Oxidase - IDMS                    |
|                 | mg/dl  | 278    | 242  | 314  | 18.00 | 36.00 |   |
| Chloride        | mmol/l | 109    | 101  | 117  | 4.00  | 8.00  | ISE indirect                                  |
| CK Total        | U/l    | 517    | 424  | 610  | 46.50 | 93.00 | CK-NAC (IFCC) 37°C                            |
|                 | U/l    | 324    | 265  | 383  | 29.50 | 59.00 | CK-NAC (IFCC) 30°C                            |
|                 | U/l    | 220    | 180  | 260  | 20.00 | 40.00 | CK-NAC (IFCC) 25°C                            |
| Creatinine      | µmol/l | 393    | 315  | 471  | 39.00 | 78.00 | Alkaline picrate no deproteinization          |
|                 | mg/dl  | 4.44   | 3.56 | 5.32 | 0.44  | 0.88  |   |
|                 | µmol/l | 414    | 331  | 497  | 41.50 | 83.00 | Roche Creatinine Plus                         |
|                 | mg/dl  | 4.68   | 3.74 | 5.62 | 0.47  | 0.94  |   |
|                 | µmol/l | 396    | 317  | 475  | 39.50 | 79.00 | Jaffe rate blanked comp. (-26 µmol/l)         |
|                 | mg/dl  | 4.47   | 3.58 | 5.36 | 0.45  | 0.89  |   |
| gamma-GT        | U/l    | 147    | 125  | 169  | 11.00 | 22.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
|                 | U/l    | 116    | 99   | 133  | 8.50  | 17.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
|                 | U/l    | 91     | 77   | 105  | 7.00  | 14.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |

## Roche Cobas C311®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|------|------|-------|-------|---|
| gamma-GT            | U/l    | 168    | 143  | 193  | 12.50 | 25.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                     | U/l    | 132    | 113  | 151  | 9.50  | 19.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                     | U/l    | 104    | 88   | 120  | 8.00  | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose             | mmol/l | 15.7   | 13.4 | 18.0 | 1.15  | 2.30  | Hexokinase  |
|                     | mg/dl  | 283    | 241  | 325  | 21.00 | 42.00 |   |
|                     | mmol/l | 15.8   | 13.4 | 18.2 | 1.20  | 2.40  | Glucose oxidase                                     |
| HDL - Cholesterol   | mmol/l | 2.90   | 2.46 | 3.34 | 0.22  | 0.44  | Direct HDL Roche 4th Generation                     |
|                     | mg/dl  | 112    | 95.0 | 129  | 8.50  | 17.00 |   |
| Iron                | µmol/l | 36.3   | 29.8 | 42.8 | 3.25  | 6.50  | Colorimetric with ppt.                              |
|                     | µg/dl  | 203    | 167  | 239  | 18.00 | 36.00 |   |
|                     | µmol/l | 36.4   | 29.9 | 42.9 | 3.25  | 6.50  | Colorimetric without ppt.                           |
|                     | µg/dl  | 203    | 167  | 239  | 18.00 | 36.00 |   |
| Lactate             | mmol/l | 5.34   | 4.38 | 6.30 | 0.48  | 0.96  | Colorimetric Lactate Oxidase                        |
|                     | mg/dl  | 48.1   | 39.5 | 56.7 | 4.30  | 8.60  |   |
| LD (LDH)            | U/l    | 350    | 298  | 402  | 26.00 | 52.00 | L->P IFCC 37°C                                      |
|                     | U/l    | 253    | 215  | 291  | 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    | 79     | 63   | 95   | 8.00  | 16.00 | Roche Colorimetric 37°C                             |
| Magnesium           | mmol/l | 1.84   | 1.62 | 2.06 | 0.11  | 0.22  | Xylidyl Blue  |
|                     | mg/dl  | 4.47   | 3.94 | 5.00 | 0.27  | 0.53  |   |
|                     | mmol/l | 1.85   | 1.63 | 2.07 | 0.11  | 0.22  | Chlorphosphonazo III                                |
|                     | mg/dl  | 4.50   | 3.96 | 5.04 | 0.27  | 0.54  |   |
| Phosphate Inorganic | mmol/l | 2.35   | 2.00 | 2.70 | 0.18  | 0.35  | Phosphomolybdate UV                                 |
|                     | mg/dl  | 7.29   | 6.20 | 8.38 | 0.55  | 1.09  |   |



## Roche Cobas C311®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|------|------|-------|-------|---|
| Potassium         | mmol/l | 6.09   | 5.60 | 6.58 | 0.25  | 0.49  | 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 | 158    | 150  | 166  | 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 | 2.92   | 2.46 | 3.38 | 0.23  | 0.46  | Lipase/Glycerol Dehydrogenase                     |
|                   | mg/dl  | 258    | 218  | 298  | 20.00 | 40.00 |   |
| 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  | 9.19   | 8.00 | 10.4 | 0.60  | 1.19  |   |
|                   | 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 | 19.6   | 16.6 | 22.6 | 1.50  | 3.00  | Urease kinetic                                    |
|                   | mg/dl  | 118    | 99.8 | 136  | 9.10  | 18.20 |   |
|                   | mmol/l | 19.6   | 16.7 | 22.5 | 1.45  | 2.90  | BUN   |
|                   | mg/dl  | 55.0   | 46.8 | 63.2 | 4.10  | 8.20  |   |

## Roche Cobas c701 / c702 / c711

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### 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  | 27.7   | 23.5 | 31.9 | 2.10  | 4.20  | Bromocresol Purple             |
|                      | g/dl | 2.77   | 2.35 | 3.19 | 0.21  | 0.42  |                                |
|                      | g/l  | 28.5   | 24.2 | 32.8 | 2.15  | 4.30  | Turbidimetric Assays           |
|                      | g/dl | 2.85   | 2.42 | 3.28 | 0.22  | 0.43  |                                |
| Alkaline Phosphatase | U/l  | 311    | 264  | 358  | 23.50 | 47.00 | Roche Integra AMP buffer 37°C  |
|                      | U/l  | 242    | 206  | 278  | 18.00 | 36.00 | Roche Integra AMP buffer 30°C  |
|                      | U/l  | 199    | 169  | 229  | 15.00 | 30.00 | Roche Integra AMP buffer 25°C  |
|                      | U/l  | 299    | 254  | 344  | 22.50 | 45.00 | Colorimetric 37°C              |
|                      | U/l  | 233    | 198  | 268  | 17.50 | 35.00 | Colorimetric 30°C              |
|                      | U/l  | 191    | 162  | 220  | 14.50 | 29.00 | Colorimetric 25°C              |
| ALT (GPT)            | U/l  | 135    | 108  | 162  | 13.50 | 27.00 | Colorimetric 37°C              |
|                      | U/l  | 100    | 80   | 120  | 10.00 | 20.00 | Colorimetric 30°C              |
|                      | U/l  | 76     | 61   | 91   | 7.50  | 15.00 | Colorimetric 25°C              |
|                      | U/l  | 136    | 108  | 164  | 14.00 | 28.00 | Tris buffer without P5P 37°C   |
|                      | U/l  | 101    | 80   | 122  | 10.50 | 21.00 | Tris buffer without P5P 30°C   |
|                      | U/l  | 77     | 61   | 93   | 8.00  | 16.00 | Tris buffer without P5P 25°C   |
| Amylase Pancreatic   | U/l  | 232    | 197  | 267  | 17.50 | 35.00 | Roche EPS Liquid 37°C          |
| Amylase Total        | U/l  | 258    | 220  | 296  | 19.00 | 38.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT)            | U/l  | 136    | 109  | 163  | 13.50 | 27.00 | Tris buffer without P5P 37°C   |
|                      | U/l  | 92     | 74   | 110  | 9.00  | 18.00 | Tris buffer without P5P 30°C   |
|                      | U/l  | 65     | 52   | 78   | 6.50  | 13.00 | Tris buffer without P5P 25°C   |

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte          | unit   | Target | low  | high | 1SD   | 2SD   | methods                             |
|------------------|--------|--------|------|------|-------|-------|-------------------------------------|
| Bile Acids       | µmol/l | 42.5   | 34.0 | 51.0 | 4.25  | 8.50  | Enzymatic Colorimetric              |
| Bicarbonate      | mmol/l | 13.4   | 10.7 | 16.1 | 1.35  | 2.70  | 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 | 29.1   | 23.0 | 35.2 | 3.05  | 6.10  | Diazo with Sulphanilic Acid         |
|                  | mg/dl  | 1.70   | 1.35 | 2.05 | 0.18  | 0.35  |                                     |
|                  | µmol/l | 29.8   | 23.5 | 36.1 | 3.15  | 6.30  | Roche DPD JG standardised           |
|                  | mg/dl  | 1.74   | 1.37 | 2.11 | 0.19  | 0.37  |                                     |
| Bilirubin Total  | 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  |                                     |
|                  | µmol/l | 79.8   | 63.0 | 96.6 | 8.40  | 16.80 | Dichlorophenyl Diazonium (DPD)      |
|                  | mg/dl  | 4.67   | 3.69 | 5.65 | 0.49  | 0.98  |                                     |
|                  | µmol/l | 80.8   | 63.8 | 97.8 | 8.50  | 17.00 | Diazonium ion                       |
|                  | mg/dl  | 4.73   | 3.73 | 5.73 | 0.50  | 1.00  |                                     |
| Calcium          | mmol/l | 3.03   | 2.73 | 3.33 | 0.15  | 0.30  | Cresolphthalein complexone          |
|                  | mg/dl  | 12.1   | 10.9 | 13.3 | 0.60  | 1.20  |                                     |
|                  | mmol/l | 3.05   | 2.75 | 3.35 | 0.15  | 0.30  | NM-BAPTA                            |
|                  | mg/dl  | 12.2   | 11.0 | 13.4 | 0.60  | 1.20  |                                     |
| Cholesterol      | mmol/l | 7.13   | 6.20 | 8.06 | 0.47  | 0.93  | Cholesterol Oxidase - Abell Kendall |
|                  | mg/dl  | 275    | 239  | 311  | 18.00 | 36.00 |                                     |
|                  | mmol/l | 7.11   | 6.18 | 8.04 | 0.47  | 0.93  | Cholesterol Oxidase - IDMS          |
|                  | mg/dl  | 274    | 239  | 309  | 17.50 | 35.00 |                                     |
| Chloride         | mmol/l | 107    | 98.5 | 116  | 4.25  | 8.50  | ISE indirect                        |

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|------|------|-------|-------|---|
| CK Total          | U/l    | 514    | 421  | 607  | 46.50 | 93.00 | CK-NAC (IFCC) 37°C                                  |
|                   | U/l    | 322    | 264  | 380  | 29.00 | 58.00 | CK-NAC (IFCC) 30°C                                  |
|                   | U/l    | 218    | 179  | 257  | 19.50 | 39.00 | CK-NAC (IFCC) 25°C                                  |
| Creatinine        | µmol/l | 405    | 324  | 486  | 40.50 | 81.00 | Roche Creatinine Plus                               |
|                   | mg/dl  | 4.58   | 3.66 | 5.50 | 0.46  | 0.92  |   |
|                   | µmol/l | 399    | 319  | 479  | 40.00 | 80.00 | Jaffe rate blanked comp. (-26 µmol/l)               |
|                   | mg/dl  | 4.51   | 3.60 | 5.42 | 0.46  | 0.91  |   |
| gamma-GT          | U/l    | 144    | 123  | 165  | 10.50 | 21.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                   | U/l    | 113    | 97   | 129  | 8.00  | 16.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                   | U/l    | 89     | 76   | 102  | 6.50  | 13.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                   | U/l    | 161    | 137  | 185  | 12.00 | 24.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                   | U/l    | 127    | 108  | 146  | 9.50  | 19.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                   | U/l    | 99     | 85   | 113  | 7.00  | 14.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose           | 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 | 2.90   | 2.46 | 3.34 | 0.22  | 0.44  | Direct HDL Roche 4th Generation                     |
|                   | mg/dl  | 112    | 95.0 | 129  | 8.50  | 17.00 |   |
| Iron              | µmol/l | 35.4   | 29.0 | 41.8 | 3.20  | 6.40  | Colorimetric with ppt.                              |
|                   | µg/dl  | 198    | 162  | 234  | 18.00 | 36.00 |   |
|                   | µmol/l | 35.3   | 28.9 | 41.7 | 3.20  | 6.40  | Colorimetric without ppt.                           |
|                   | µg/dl  | 197    | 162  | 232  | 17.50 | 35.00 |   |
| Lactate           | mmol/l | 5.26   | 4.31 | 6.21 | 0.48  | 0.95  | Colorimetric Lactate Oxidase                        |
|                   | mg/dl  | 47.4   | 38.8 | 56.0 | 4.30  | 8.60  |   |
| LD (LDH)          | U/l    | 342    | 290  | 394  | 26.00 | 52.00 | L->P IFCC 37°C                                      |
|                   | U/l    | 247    | 209  | 285  | 19.00 | 38.00 | L->P IFCC 30°C                                      |
|                   | U/l    | 173    | 147  | 199  | 13.00 | 26.00 | L->P IFCC 25°C                                      |

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|------|------|-------|-------|---|
| 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 | 1.84   | 1.62 | 2.06 | 0.11  | 0.22  | Xylidyl Blue                                      |
|                     | mg/dl  | 4.47   | 3.94 | 5.00 | 0.27  | 0.53  |   |
| Phosphate Inorganic | mmol/l | 2.33   | 1.98 | 2.68 | 0.18  | 0.35  | Phosphomolybdate UV                               |
|                     | mg/dl  | 7.22   | 6.14 | 8.30 | 0.54  | 1.08  |   |
| Potassium           | mmol/l | 5.91   | 5.44 | 6.38 | 0.24  | 0.47  | 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  |   |
| Sodium              | mmol/l | 154    | 146  | 162  | 4.00  | 8.00  | ISE method - indirect                             |
| TIBC                | µmol/l | 40.7   | 32.1 | 49.3 | 4.30  | 8.60  | FE+UIBC(saturation with iron)                     |
|                     | µg/dl  | 228    | 179  | 277  | 24.50 | 49.00 |   |
| 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 | 2.79   | 2.35 | 3.23 | 0.22  | 0.44  | L/G Kinase EP. no correction                      |
|                     | mg/dl  | 247    | 208  | 286  | 19.50 | 39.00 |   |
| Uric Acid (Urate)   | mmol/l | 0.53   | 0.46 | 0.60 | 0.03  | 0.07  | Uricase peroxidase with ascorbate oxidase         |
|                     | mg/dl  | 8.92   | 7.76 | 10.1 | 0.58  | 1.16  |   |
|                     | mmol/l | 0.53   | 0.46 | 0.60 | 0.03  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                     | mg/dl  | 8.94   | 7.78 | 10.1 | 0.58  | 1.16  |   |
|                     | mmol/l | 0.53   | 0.46 | 0.60 | 0.03  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                     | mg/dl  | 8.85   | 7.71 | 9.99 | 0.57  | 1.14  |   |
| Urea                | mmol/l | 19.1   | 16.2 | 22.0 | 1.45  | 2.90  | Urease kinetic                                    |
|                     | mg/dl  | 115    | 97.4 | 133  | 8.80  | 17.60 |   |

**Roche Cobas c701 / c702 / c711**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte | unit   | Target | low  | high | 1SD  | 2SD  | methods |
|---------|--------|--------|------|------|------|------|---------|
| Urea    | mmol/l | 19.1   | 16.2 | 22.0 | 1.45 | 2.90 | BUN     |
|         | mg/dl  | 53.6   | 45.6 | 61.6 | 4.00 | 8.00 |         |

## RX SERIES®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### 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    | 530    | 450  | 610  | 40.00 | 80.00 | Diethanolamine buffer DEA 37°C      |
|                      | U/l    | 348    | 296  | 400  | 26.00 | 52.00 | AMP optimised to IFCC 37°C          |
| ALT (GPT)            | U/l    | 151    | 120  | 182  | 15.50 | 31.00 | Tris buffer without P5P 37°C        |
| Amylase Pancreatic   | U/l    | 268    | 228  | 308  | 20.00 | 40.00 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total        | U/l    | 296    | 251  | 341  | 22.50 | 45.00 | Randox Liquid Ethylidene pNPG7 37°C |
| AST (GOT)            | U/l    | 151    | 121  | 181  | 15.00 | 30.00 | Tris buffer without P5P 37°C        |
| Bile Acids           | µmol/l | 42.7   | 34.2 | 51.2 | 4.25  | 8.50  | 5th Generation Colorimetric         |
| Bicarbonate          | mmol/l | 15.5   | 12.3 | 18.7 | 1.60  | 3.20  | Enzymatic                           |
| Bilirubin Direct     | µmol/l | 29.2   | 23.1 | 35.3 | 3.05  | 6.10  | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 1.71   | 1.35 | 2.07 | 0.18  | 0.36  |                                     |
|                      | µmol/l | 28.8   | 22.8 | 34.8 | 3.00  | 6.00  | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 1.68   | 1.33 | 2.03 | 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 | 95.6   | 75.5 | 116  | 10.05 | 20.10 | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 5.59   | 4.42 | 6.76 | 0.59  | 1.17  |                                     |
| Calcium              | mmol/l | 3.11   | 2.80 | 3.42 | 0.16  | 0.31  | Arsenazo III                        |
|                      | mg/dl  | 12.5   | 11.2 | 13.8 | 0.65  | 1.30  |                                     |
| 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 |                                     |

## RX SERIES®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD    | methods   |
|---------------------|--------|--------|------|------|-------|--------|---|
| Chloride            | mmol/l | 109    | 100  | 118  | 4.50  | 9.00   | ISE direct  |
| CK Total            | U/l    | 568    | 466  | 670  | 51.00 | 102.00 | CK-NAC substrate start (DGKC) 37°C                  |
|                     | U/l    | 588    | 482  | 694  | 53.00 | 106.00 | CK-NAC (IFCC) 37°C                                  |
| Creatinine          | µmol/l | 332    | 266  | 398  | 33.00 | 66.00  | Alkaline picrate no deproteinization                |
|                     | mg/dl  | 3.75   | 3.01 | 4.49 | 0.37  | 0.74   |   |
|                     | µmol/l | 408    | 327  | 489  | 40.50 | 81.00  | Enzymatic UV method                                 |
| mg/dl               | 4.61   | 3.70   | 5.52 | 0.46 | 0.91  |        |   |
| gamma-GT            | U/l    | 173    | 147  | 199  | 13.00 | 26.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 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 | 15.7   | 13.4 | 18.0 | 1.15  | 2.30   | Glucose oxidase                                     |
|                     | mg/dl  | 283    | 241  | 325  | 21.00 | 42.00  |   |
| Iron                | µmol/l | 38.6   | 31.7 | 45.5 | 3.45  | 6.90   | Colorimetric without ppt.                           |
|                     | µg/dl  | 216    | 177  | 255  | 19.50 | 39.00  |   |
| Lactate             | mmol/l | 5.30   | 4.35 | 6.25 | 0.48  | 0.95   | Colorimetric Lactate Oxidase                        |
|                     | mg/dl  | 47.8   | 39.2 | 56.4 | 4.30  | 8.60   |   |
| LD (LDH)            | U/l    | 695    | 590  | 800  | 52.50 | 105.00 | P->L German methods 37°C                            |
|                     | U/l    | 337    | 286  | 388  | 25.50 | 51.00  | L->P IFCC 37°C                                      |
| Lipase              | U/l    | 98     | 78   | 118  | 10.00 | 20.00  | Randox Colorimetric 37°C                            |
| Magnesium           | mmol/l | 1.83   | 1.61 | 2.05 | 0.11  | 0.22   | Xylidyl Blue  |
|                     | mg/dl  | 4.45   | 3.91 | 4.99 | 0.27  | 0.54   |   |
| Phosphate Inorganic | mmol/l | 2.40   | 2.04 | 2.76 | 0.18  | 0.36   | Phosphomolybdate UV                                 |
|                     | mg/dl  | 7.44   | 6.32 | 8.56 | 0.56  | 1.12   |   |
| Potassium           | mmol/l | 5.98   | 5.50 | 6.46 | 0.24  | 0.48   | ISE method - direct                                 |



## RX SERIES®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|------|------|-------|-------|---|
| Potassium         | mmol/l | 6.22   | 5.72 | 6.72 | 0.25  | 0.50  | Enzymatic   |
| Protein Total     | g/l    | 47.7   | 38.2 | 57.2 | 4.75  | 9.50  | Biuret reaction end point                         |
|                   | g/dl   | 4.77   | 3.82 | 5.72 | 0.48  | 0.95  |   |
| Sodium            | mmol/l | 157    | 149  | 165  | 4.00  | 8.00  | ISE method - direct                               |
|                   | mmol/l | 161    | 153  | 169  | 4.00  | 8.00  | Enzymatic   |
| TIBC              | µmol/l | 51.2   | 40.4 | 62.0 | 5.40  | 10.80 | Direct Colorimetric                               |
|                   | µg/dl  | 286    | 226  | 346  | 30.00 | 60.00 |   |
| 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 |   |
| Uric Acid (Urate) | mmol/l | 0.57   | 0.49 | 0.64 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.51   | 8.28 | 10.7 | 0.62  | 1.23  |   |
|                   | mmol/l | 0.60   | 0.52 | 0.67 | 0.04  | 0.08  | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 10.0   | 8.72 | 11.3 | 0.65  | 1.29  |   |
| 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  |   |

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                             |
|----------------------|--------|--------|------|------|-------|-------|-------------------------------------|
| Albumin              | g/l    | 29.2   | 24.8 | 33.6 | 2.20  | 4.40  | Bromocresol Green                   |
|                      | g/dl   | 2.92   | 2.48 | 3.36 | 0.22  | 0.44  |                                     |
|                      | g/l    | 27.1   | 23.1 | 31.1 | 2.00  | 4.00  | Bromocresol Purple                  |
|                      | g/dl   | 2.71   | 2.31 | 3.11 | 0.20  | 0.40  |                                     |
| Alkaline Phosphatase | U/l    | 310    | 263  | 357  | 23.50 | 47.00 | AMP optimised to IFCC 37°C          |
| ALT (GPT)            | U/l    | 160    | 128  | 192  | 16.00 | 32.00 | Tris buffer without P5P 37°C        |
| Amylase Total        | U/l    | 269    | 228  | 310  | 20.50 | 41.00 | Siemens - blocked pNPG7 37°C        |
| AST (GOT)            | U/l    | 151    | 121  | 181  | 15.00 | 30.00 | 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 | 15.2   | 12.1 | 18.3 | 1.55  | 3.10  | Enzymatic                           |
| Bilirubin Direct     | µmol/l | 29.2   | 23.1 | 35.3 | 3.05  | 6.10  | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 1.71   | 1.35 | 2.07 | 0.18  | 0.36  |                                     |
| Bilirubin Total      | µmol/l | 95.6   | 75.5 | 116  | 10.05 | 20.10 | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 5.59   | 4.42 | 6.76 | 0.59  | 1.17  |                                     |
| 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 | 3.00   | 2.70 | 3.30 | 0.15  | 0.30  | Arsenazo III                        |
| Cholesterol          | mmol/l | 7.24   | 6.30 | 8.18 | 0.47  | 0.94  | Cholesterol Oxidase - Abell Kendall |
|                      | mg/dl  | 279    | 243  | 315  | 18.00 | 36.00 |                                     |
| Chloride             | mmol/l | 113    | 104  | 122  | 4.50  | 9.00  | ISE indirect                        |

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD    | methods   |
|---------------------|--------|--------|------|------|-------|--------|---|
| CK Total            | U/l    | 552    | 453  | 651  | 49.50 | 99.00  | CK-NAC (IFCC) 37°C                                  |
| Creatinine          | μmol/l | 403    | 322  | 484  | 40.50 | 81.00  | Enzymatic UV method                                 |
|                     | mg/dl  | 4.55   | 3.64 | 5.46 | 0.46  | 0.91   |   |
|                     | μmol/l | 378    | 303  | 453  | 37.50 | 75.00  | Jaffe rate blanked comp. (-26 μmol/l)               |
|                     | mg/dl  | 4.27   | 3.42 | 5.12 | 0.43  | 0.85   |   |
| gamma-GT            | U/l    | 148    | 126  | 170  | 11.00 | 22.00  | 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 | 15.3   | 13.0 | 17.6 | 1.15  | 2.30   | Glucose oxidase                                     |
|                     | mg/dl  | 276    | 234  | 318  | 21.00 | 42.00  |   |
| HDL - Cholesterol   | mmol/l | 2.13   | 1.81 | 2.45 | 0.16  | 0.32   | Direct Clearance Method                             |
|                     | mg/dl  | 82.2   | 69.9 | 94.5 | 6.15  | 12.30  |   |
| Iron                | μmol/l | 36.8   | 30.1 | 43.5 | 3.35  | 6.70   | Colorimetric without ppt.                           |
|                     | μg/dl  | 206    | 168  | 244  | 19.00 | 38.00  |   |
| Lactate             | mmol/l | 5.18   | 4.25 | 6.11 | 0.47  | 0.93   | Colorimetric Lactate Oxidase                        |
|                     | mg/dl  | 46.7   | 38.3 | 55.1 | 4.20  | 8.40   |   |
| LD (LDH)            | U/l    | 680    | 578  | 782  | 51.00 | 102.00 | P->L German methods 37°C                            |
|                     | U/l    | 346    | 294  | 398  | 26.00 | 52.00  | L->P IFCC 37°C                                      |
| Lipase              | U/l    | 85     | 68   | 102  | 8.50  | 17.00  | Other Colorimetric 37°C                             |
| Magnesium           | mmol/l | 1.76   | 1.55 | 1.97 | 0.11  | 0.21   | Xylidyl Blue  |
|                     | mg/dl  | 4.28   | 3.77 | 4.79 | 0.26  | 0.51   |   |
| Phosphate Inorganic | mmol/l | 2.42   | 2.06 | 2.78 | 0.18  | 0.36   | Phosphomolybdate UV                                 |
|                     | mg/dl  | 7.50   | 6.39 | 8.61 | 0.56  | 1.11   |   |
| Potassium           | mmol/l | 6.09   | 5.60 | 6.58 | 0.25  | 0.49   | ISE method - indirect                               |
| Protein Total       | g/l    | 45.0   | 36.0 | 54.0 | 4.50  | 9.00   | Biuret reaction end point                           |
|                     | g/dl   | 4.50   | 3.60 | 5.40 | 0.45  | 0.90   |   |

**SIEMENS ADVIA 1200/1650/1800/2400®****ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

**Range**

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods                                 |
|-------------------|--------|--------|------|------|-------|-------|---|
| Sodium            | mmol/l | 159    | 151  | 167  | 4.00  | 8.00  | ISE method - indirect                   |
| TIBC              | μmol/l | 44.5   | 35.1 | 53.9 | 4.70  | 9.40  | Direct Colorimetric                     |
|                   | μg/dl  | 249    | 196  | 302  | 26.50 | 53.00 |   |
|                   | μmol/l | 41.3   | 32.6 | 50.0 | 4.35  | 8.70  | Calculated from Transferrin             |
|                   | μg/dl  | 231    | 182  | 280  | 24.50 | 49.00 |   |
| 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 |   |
| Uric Acid (Urate) | 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  |   |
| 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  |   |

## Siemens Atellica Solution

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                             |
|----------------------|--------|--------|------|------|-------|-------|-------------------------------------|
| Albumin              | g/l    | 29.7   | 25.2 | 34.2 | 2.25  | 4.50  | Bromocresol Green                   |
|                      | g/dl   | 2.97   | 2.52 | 3.42 | 0.23  | 0.45  |                                     |
|                      | 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    | 322    | 274  | 370  | 24.00 | 48.00 | AMP optimised to IFCC 37°C          |
| ALT (GPT)            | U/l    | 163    | 130  | 196  | 16.50 | 33.00 | Tris buffer without P5P 37°C        |
| Amylase Pancreatic   | U/l    | 253    | 215  | 291  | 19.00 | 38.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total        | U/l    | 291    | 247  | 335  | 22.00 | 44.00 | Siemens - blocked pNPG7 37°C        |
| AST (GOT)            | U/l    | 159    | 127  | 191  | 16.00 | 32.00 | Tris buffer without P5P 37°C        |
| Bicarbonate          | mmol/l | 14.8   | 11.7 | 17.9 | 1.55  | 3.10  | Enzymatic                           |
| Bilirubin Direct     | µmol/l | 31.5   | 24.8 | 38.2 | 3.35  | 6.70  | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 1.84   | 1.45 | 2.23 | 0.20  | 0.39  |                                     |
| Bilirubin Total      | µmol/l | 97.4   | 76.9 | 118  | 10.25 | 20.50 | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 5.70   | 4.50 | 6.90 | 0.60  | 1.20  |                                     |
| Calcium              | mmol/l | 3.22   | 2.90 | 3.54 | 0.16  | 0.32  | Cresolphthalein complexone          |
|                      | mg/dl  | 12.9   | 11.6 | 14.2 | 0.65  | 1.30  |                                     |
|                      | 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 | 7.37   | 6.41 | 8.33 | 0.48  | 0.96  | Cholesterol Oxidase - Abell Kendall |
|                      | mg/dl  | 284    | 247  | 321  | 18.50 | 37.00 |                                     |
|                      | mmol/l | 7.39   | 6.43 | 8.35 | 0.48  | 0.96  | Cholesterol Oxidase - IDMS          |
|                      | mg/dl  | 285    | 248  | 322  | 18.50 | 37.00 |                                     |

## Siemens Atellica Solution

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|------|------|-------|-------|---|
| Chloride            | mmol/l | 115    | 106  | 124  | 4.50  | 9.00  | ISE indirect  |
| CK Total            | U/l    | 515    | 422  | 608  | 46.50 | 93.00 | CK-NAC (IFCC) 37°C                                  |
| Creatinine          | μmol/l | 385    | 308  | 462  | 38.50 | 77.00 | Alkaline picrate no deproteinization                |
|                     | mg/dl  | 4.35   | 3.48 | 5.22 | 0.44  | 0.87  |   |
|                     | μmol/l | 387    | 309  | 465  | 39.00 | 78.00 | Jaffe rate blanked comp. (-26 μmol/l)               |
|                     | mg/dl  | 4.37   | 3.49 | 5.25 | 0.44  | 0.88  |   |
| gamma-GT            | U/l    | 151    | 129  | 173  | 11.00 | 22.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose             | mmol/l | 15.5   | 13.1 | 17.9 | 1.20  | 2.40  | Hexokinase  |
|                     | mg/dl  | 279    | 236  | 322  | 21.50 | 43.00 |   |
|                     | 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 | 2.38   | 2.02 | 2.74 | 0.18  | 0.36  | Direct Clearance Method                             |
|                     | mg/dl  | 91.9   | 78.0 | 106  | 6.95  | 13.90 |   |
| Iron                | μmol/l | 37.1   | 30.4 | 43.8 | 3.35  | 6.70  | Colorimetric without ppt.                           |
|                     | μg/dl  | 207    | 170  | 244  | 18.50 | 37.00 |   |
| LD (LDH)            | U/l    | 340    | 289  | 391  | 25.50 | 51.00 | L->P IFCC 37°C                                      |
| Lipase              | U/l    | 84     | 67   | 101  | 8.50  | 17.00 | Other Colorimetric 37°C                             |
| Lithium             | mmol/l | 2.01   | 1.76 | 2.26 | 0.13  | 0.25  | Spectrophotometric                                  |
|                     | mg/dl  | 1.40   | 1.22 | 1.58 | 0.09  | 0.18  |   |
| 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 | 2.45   | 2.08 | 2.82 | 0.19  | 0.37  | Phosphomolybdate UV                                 |
|                     | mg/dl  | 7.60   | 6.45 | 8.75 | 0.58  | 1.15  |   |
| Potassium           | mmol/l | 5.95   | 5.47 | 6.43 | 0.24  | 0.48  | ISE method - indirect                               |

**Siemens Atellica Solution**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods                                 |
|-------------------|--------|--------|------|------|-------|-------|---|
| Protein Total     | g/l    | 45.3   | 36.2 | 54.4 | 4.55  | 9.10  | Biuret reaction end point               |
|                   | g/dl   | 4.53   | 3.62 | 5.44 | 0.46  | 0.91  |   |
| Sodium            | mmol/l | 158    | 150  | 166  | 4.00  | 8.00  | ISE method - indirect                   |
| TIBC              | μmol/l | 47.7   | 37.6 | 57.8 | 5.05  | 10.10 | Direct Colorimetric                     |
|                   | μg/dl  | 267    | 210  | 324  | 28.50 | 57.00 |   |
| Triglycerides     | mmol/l | 3.07   | 2.58 | 3.56 | 0.25  | 0.49  | Lipase/GPO-PAP no correction            |
|                   | mg/dl  | 272    | 228  | 316  | 22.00 | 44.00 |   |
| Uric Acid (Urate) | 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  |   |
| Urea              | 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  |   |

## SIEMENS DIMENSION EXL®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte              | unit   | Target | low   | high | 1SD   | 2SD   | methods  |
|----------------------|--------|--------|-------|------|-------|-------|--|
| Albumin              | g/l    | 28.0   | 23.8  | 32.2 | 2.10  | 4.20  | Bromocresol Purple                             |
|                      | g/dl   | 2.80   | 2.38  | 3.22 | 0.21  | 0.42  |  |
| Alkaline Phosphatase | U/l    | 308    | 262   | 354  | 23.00 | 46.00 | Siemens Dimension AMP buffer 37°C              |
| ALT (GPT)            | U/l    | 155    | 124   | 186  | 15.50 | 31.00 | Tris buffer with P5P 37°C                      |
|                      | U/l    | 156    | 125   | 187  | 15.50 | 31.00 | Tris buffer with P5P NVKC 37°C                 |
|                      | U/l    | 153    | 122   | 184  | 15.50 | 31.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total        | U/l    | 315    | 268   | 362  | 23.50 | 47.00 | Siemens 2-chloro-pNPG3 37°C                    |
| AST (GOT)            | U/l    | 170    | 136   | 204  | 17.00 | 34.00 | Tris buffer with P5P 37°C                      |
|                      | U/l    | 177    | 141   | 213  | 18.00 | 36.00 | Tris buffer with P5P NVKC 37°C                 |
|                      | U/l    | 172    | 138   | 206  | 17.00 | 34.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bilirubin Direct     | µmol/l | 17.2   | 13.6  | 20.8 | 1.80  | 3.60  | Diazo/Sulphanilic Siemens Dimension            |
|                      | mg/dl  | 1.01   | 0.796 | 1.22 | 0.11  | 0.21  |  |
| Bilirubin Total      | µmol/l | 85.8   | 67.8  | 104  | 9.00  | 18.00 | Diazo with Sulphanilic Acid                    |
|                      | mg/dl  | 5.02   | 3.97  | 6.07 | 0.53  | 1.05  |  |
| Calcium              | mmol/l | 3.03   | 2.73  | 3.33 | 0.15  | 0.30  | Cresolphthalein complexone                     |
|                      | mg/dl  | 12.1   | 10.9  | 13.3 | 0.60  | 1.20  |  |
| Cholesterol          | mmol/l | 6.79   | 5.91  | 7.67 | 0.44  | 0.88  | Dimension-Siemens reagents                     |
|                      | mg/dl  | 262    | 228   | 296  | 17.00 | 34.00 |  |
| Chloride             | mmol/l | 114    | 105   | 123  | 4.50  | 9.00  | ISE indirect                                   |
| CK Total             | U/l    | 503    | 412   | 594  | 45.50 | 91.00 | CK-NAC (IFCC) 37°C                             |
| Creatinine           | µmol/l | 400    | 320   | 480  | 40.00 | 80.00 | Alkaline picrate no deproteinization           |
|                      | mg/dl  | 4.52   | 3.62  | 5.42 | 0.45  | 0.90  |  |



## SIEMENS DIMENSION EXL®

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

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

### Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|------|------|-------|-------|---|
| Creatinine          | µmol/l | 413    | 330  | 496  | 41.50 | 83.00 | Jaffe rate blanked                                  |
|                     | mg/dl  | 4.67   | 3.73 | 5.61 | 0.47  | 0.94  |   |
| gamma-GT            | U/l    | 173    | 147  | 199  | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                     | U/l    | 198    | 169  | 227  | 14.50 | 29.00 | Siemens Dimension (non IFCC) 37°C                   |
| Glucose             | mmol/l | 15.9   | 13.5 | 18.3 | 1.20  | 2.40  | Hexokinase  |
|                     | mg/dl  | 287    | 243  | 331  | 22.00 | 44.00 |   |
| HDL - Cholesterol   | mmol/l | 2.78   | 2.37 | 3.19 | 0.21  | 0.41  | Direct HDL PEGME                                    |
|                     | mg/dl  | 107    | 91.5 | 123  | 7.75  | 15.50 |   |
| Iron                | µmol/l | 35.5   | 29.1 | 41.9 | 3.20  | 6.40  | Colorimetric without ppt.                           |
|                     | µg/dl  | 198    | 163  | 233  | 17.50 | 35.00 |   |
| LD (LDH)            | U/l    | 340    | 289  | 391  | 25.50 | 51.00 | L->P IFCC 37°C                                      |
| Magnesium           | mmol/l | 1.91   | 1.68 | 2.14 | 0.12  | 0.23  | Methylthymol blue                                   |
|                     | mg/dl  | 4.64   | 4.08 | 5.20 | 0.28  | 0.56  |   |
| Phosphate Inorganic | mmol/l | 2.49   | 2.11 | 2.87 | 0.19  | 0.38  | Phosphomolybdate enzymatic                          |
|                     | mg/dl  | 7.72   | 6.54 | 8.90 | 0.59  | 1.18  |   |
|                     | mmol/l | 2.37   | 2.02 | 2.72 | 0.18  | 0.35  | Phosphomolybdate UV                                 |
|                     | mg/dl  | 7.35   | 6.26 | 8.44 | 0.55  | 1.09  |   |
| Potassium           | mmol/l | 6.07   | 5.58 | 6.56 | 0.25  | 0.49  | ISE method - indirect                               |
| Protein Total       | g/l    | 46.5   | 37.2 | 55.8 | 4.65  | 9.30  | Biuret reaction end point                           |
|                     | g/dl   | 4.65   | 3.72 | 5.58 | 0.47  | 0.93  |   |
| Sodium              | mmol/l | 158    | 150  | 166  | 4.00  | 8.00  | ISE method - indirect                               |
| Triglycerides       | mmol/l | 2.90   | 2.43 | 3.37 | 0.24  | 0.47  | Lipase/GPO-PAP no correction                        |
|                     | mg/dl  | 257    | 215  | 299  | 21.00 | 42.00 |   |
| 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  |   |

**SIEMENS DIMENSION EXL®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1247UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2026-01-28

**Range**

| Analyte           | unit   | Target | low  | high | 1SD  | 2SD   | methods                       |
|-------------------|--------|--------|------|------|------|-------|-------------------------------|
| Uric Acid (Urate) | mmol/l | 0.54   | 0.47 | 0.61 | 0.04 | 0.07  | Spectrophotometric at 280-290 |
|                   | mg/dl  | 9.14   | 7.96 | 10.3 | 0.59 | 1.18  |                               |
| Urea              | mmol/l | 20.0   | 17.0 | 23.0 | 1.50 | 3.00  | Urease kinetic                |
|                   | mg/dl  | 120    | 102  | 138  | 9.00 | 18.00 |                               |
|                   | 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  |                               |