

## 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> 947UE   | <b>EXPIRY:</b> 2021-05-28   |                       |

### INTENDED USE

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

### DEVICE DESCRIPTION

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

### SAFETY PRECAUTIONS AND WARNINGS

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

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

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

Health and Safety Data Sheets are available on request.

### STORAGE AND STABILITY

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

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

### LIMITATIONS

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

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

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

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

Total PSA is stable for 3 days at +2°C to +8°C, or 28 days in aliquots frozen at -18°C to -24°C.

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

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

The control should not be used as a calibration material.

### PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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

**MATERIALS PROVIDED**

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

**MATERIALS REQUIRED BUT NOT PROVIDED**

Volumetric pipette

**ASSIGNED VALUES**

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

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

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

**NOTES**

® All trademarks recognised.

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

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## Abbott Architect c/ci Systems®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                             |
|----------------------|--------|--------|-------|------|-------|-------|-------------------------------------|
|                      |        |        | low   | high |       |       |                                     |
| Albumin              | g/l    | 27.9   | 23.7  | 32.1 | 2.10  | 4.20  | Bromocresol Green                   |
|                      | g/dl   | 2.79   | 2.37  | 3.21 | 0.21  | 0.42  |                                     |
|                      | g/l    | 25.8   | 21.9  | 29.7 | 1.95  | 3.90  | Bromocresol Purple                  |
|                      | g/dl   | 2.58   | 2.19  | 2.97 | 0.20  | 0.39  |                                     |
| Alkaline Phosphatase | U/l    | 307    | 261   | 353  | 23.00 | 46.00 | AMP optimised to IFCC 37°C          |
|                      | U/l    | 304    | 259   | 349  | 22.50 | 45.00 | AMP non-optimised 37°C              |
|                      | U/l    | 291    | 248   | 334  | 21.50 | 43.00 | Colorimetric 37°C                   |
| ALT (GPT)            | U/l    | 133    | 106   | 160  | 13.50 | 27.00 | Tris buffer without P5P 37°C        |
| Amylase Pancreatic   | U/l    | 251    | 214   | 288  | 18.50 | 37.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total        | U/l    | 306    | 260   | 352  | 23.00 | 46.00 | Abbott Architect Non-IFCC Cal. 37°C |
|                      | U/l    | 339    | 289   | 389  | 25.00 | 50.00 | Abbott Architect IFCC Cal. 37°C     |
| AST (GOT)            | U/l    | 146    | 117   | 175  | 14.50 | 29.00 | Tris buffer without P5P 37°C        |
| Bicarbonate          | mmol/l | 15.9   | 12.6  | 19.2 | 1.65  | 3.30  | Enzymatic                           |
| Bile Acids           | µmol/l | 43.2   | 34.5  | 51.9 | 4.35  | 8.70  | Enzymatic Colorimetric              |
| Bilirubin Direct     | µmol/l | 29.0   | 22.9  | 35.1 | 3.05  | 6.10  | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 1.70   | 1.34  | 2.06 | 0.18  | 0.36  |                                     |
|                      | µmol/l | 28.8   | 22.7  | 34.9 | 3.05  | 6.10  | Diazo with Dichloroaniline (DCA)    |
|                      | mg/dl  | 1.68   | 1.33  | 2.03 | 0.18  | 0.35  |                                     |
| Bilirubin Total      | µmol/l | 78.6   | 62.1  | 95.1 | 8.25  | 16.50 | Diazo with Dichloroaniline (DCA)    |
|                      | mg/dl  | 4.60   | 3.63  | 5.57 | 0.49  | 0.97  |                                     |
|                      | µmol/l | 79.0   | 62.4  | 95.6 | 8.30  | 16.60 | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 4.62   | 3.65  | 5.59 | 0.49  | 0.97  |                                     |

## Abbott Architect c/ci Systems®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte         | unit   | Target | Range |       | 1SD    | 2SD            | methods   |
|-----------------|--------|--------|-------|-------|--------|----------------|---|
|                 |        |        | low   | high  |        |                |   |
| Bilirubin Total | µmol/l | 77.3   | 61.1  | 93.5  | 8.10   | 16.20          | Diazonium ion                                       |
|                 | mg/dl  | 4.52   | 3.57  | 5.47  | 0.48   | 0.95           |   |
| Calcium         | mmol/l | 3.08   | 2.77  | 3.39  | 0.16   | 0.31           | Arsenazo III  |
|                 | mg/dl  | 12.3   | 11.1  | 13.5  | 0.60   | 1.20           |   |
| Chloride        | mmol/l | 115    | 105   | 125   | 5.00   | 10.00          | ISE indirect  |
| Cholesterol     | mmol/l | 7.58   | 6.60  | 8.56  | 0.49   | 0.98           | Cholesterol Oxidase                                 |
|                 | mg/dl  | 293    | 255   | 331   | 19.00  | 38.00          |   |
| Cholinesterase  | U/l    | 5873   | 4699  | 7047  | 587.00 | 1174.00        | Colorimetric Butyrylthiocholine 37°C                |
| CK Total        | U/l    | 551    | 452   | 650   | 49.50  | 99.00          | CK-NAC (IFCC) 37°C                                  |
| Creatinine      | µmol/l | 395    | 316   | 474   | 39.50  | 79.00          | Alkaline picrate no deproteinization                |
|                 | mg/dl  | 4.46   | 3.57  | 5.35  | 0.45   | 0.89           |   |
|                 | µmol/l | 384    | 307   | 461   | 38.50  | 77.00          | Enzymatic UV method                                 |
|                 | mg/dl  | 4.34   | 3.47  | 5.21  | 0.44   | 0.87           |   |
|                 | µmol/l | 386    | 309   | 463   | 38.50  | 77.00          | Creatinine PAP method                               |
|                 | mg/dl  | 4.36   | 3.49  | 5.23  | 0.44   | 0.87           |   |
|                 | µmol/l | 392    | 314   | 470   | 39.00  | 78.00          | Jaffe rate blanked                                  |
|                 | mg/dl  | 4.43   | 3.55  | 5.31  | 0.44   | 0.88           |   |
| µmol/l          | 396    | 317    | 475   | 39.50 | 79.00  | IDMS traceable |   |
| mg/dl           | 4.47   | 3.58   | 5.36  | 0.45  | 0.89   |                |   |
| gamma-GT        | U/l    | 175    | 149   | 201   | 13.00  | 26.00          | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                 | U/l    | 170    | 145   | 195   | 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           | Hexokinase  |
|                 | mg/dl  | 285    | 241   | 329   | 22.00  | 44.00          |   |
|                 | mmol/l | 16.0   | 13.6  | 18.4  | 1.20   | 2.40           | Glucose oxidase                                     |
|                 | mg/dl  | 288    | 245   | 331   | 21.50  | 43.00          |   |

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Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit    | Target | Range |      | 1SD   | 2SD   | methods                      |                           |
|---------------------|---------|--------|-------|------|-------|-------|------------------------------|---------------------------|
|                     |         |        | low   | high |       |       |                              |                           |
| HDL - Cholesterol   | mmol/l  | 2.64   | 2.24  | 3.04 | 0.20  | 0.40  | Direct HDL PPD               |                           |
|                     | mg/dl   | 102    | 86.5  | 118  | 7.75  | 15.50 |                              |                           |
|                     | mmol/l  | 2.63   | 2.23  | 3.03 | 0.20  | 0.40  | Direct Clearance Method      |                           |
|                     | mg/dl   | 102    | 86.1  | 118  | 7.95  | 15.90 |                              |                           |
| Iron                | mmol/l  | 2.60   | 2.21  | 2.99 | 0.20  | 0.39  | HDL - Ultra                  |                           |
|                     | mg/dl   | 100    | 85.3  | 115  | 7.35  | 14.70 |                              |                           |
|                     | Iron    | µmol/l | 37.6  | 30.9 | 44.3  | 3.35  | 6.70                         | Colorimetric with ppt.    |
|                     |         | µg/dl  | 210   | 173  | 247   | 18.50 | 37.00                        | Colorimetric without ppt. |
| µmol/l              |         | 36.8   | 30.2  | 43.4 | 3.30  | 6.60  |                              |                           |
| Lactate             | µg/dl   | 206    | 169   | 243  | 18.50 | 37.00 | Colorimetric Lactate Oxidase |                           |
|                     | mmol/l  | 5.70   | 4.67  | 6.73 | 0.52  | 1.03  |                              |                           |
| LD (LDH)            | mg/dl   | 51.4   | 42.1  | 60.7 | 4.65  | 9.30  | L->P 37°C                    |                           |
|                     | U/l     | 362    | 308   | 416  | 27.00 | 54.00 |                              |                           |
| Lipase              | U/l     | 359    | 305   | 413  | 27.00 | 54.00 | L->P IFCC 37°C               |                           |
|                     | U/l     | 57     | 46    | 68   | 5.50  | 11.00 | Other Colorimetric 37°C      |                           |
| Lithium             | mmol/l  | 2.03   | 1.79  | 2.27 | 0.12  | 0.24  | Spectrophotometric           |                           |
|                     | mg/dl   | 1.41   | 1.24  | 1.58 | 0.09  | 0.17  |                              |                           |
| Magnesium           | mmol/l  | 1.69   | 1.49  | 1.89 | 0.10  | 0.20  | Arsenazo III                 |                           |
|                     | mg/dl   | 4.11   | 3.62  | 4.60 | 0.25  | 0.49  |                              |                           |
|                     | mmol/l  | 1.72   | 1.51  | 1.93 | 0.11  | 0.21  | Enzymatic                    |                           |
|                     | mg/dl   | 4.18   | 3.67  | 4.69 | 0.26  | 0.51  |                              |                           |
| Osmolality          | mOsm/kg | 354    | 283   | 425  | 35.50 | 71.00 | Calculated                   |                           |
| Phosphate Inorganic | mmol/l  | 2.17   | 1.84  | 2.50 | 0.17  | 0.33  | Phosphomolybdate enzymatic   |                           |
|                     | mg/dl   | 6.73   | 5.70  | 7.76 | 0.52  | 1.03  |                              |                           |

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods                                   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| Phosphate Inorganic | mmol/l | 2.19   | 1.86  | 2.52 | 0.17  | 0.33  | Phosphomolybdate UV                       |
|                     | mg/dl  | 6.79   | 5.77  | 7.81 | 0.51  | 1.02  |   |
| Potassium           | mmol/l | 6.21   | 5.72  | 6.70 | 0.25  | 0.49  | 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 | 159    | 151   | 167  | 4.00  | 8.00  | ISE method - indirect                     |
| TIBC                | µmol/l | 49.2   | 38.9  | 59.5 | 5.15  | 10.30 | FE+UIBC(saturation with iron)             |
|                     | µg/dl  | 275    | 217   | 333  | 29.00 | 58.00 |   |
| Triglycerides       | mmol/l | 2.93   | 2.46  | 3.40 | 0.24  | 0.47  | Lipase/GPO-PAP no correction              |
|                     | mg/dl  | 259    | 218   | 300  | 20.50 | 41.00 |   |
|                     | mmol/l | 2.95   | 2.48  | 3.42 | 0.24  | 0.47  | L/G Kinase EP. no correction              |
|                     | mg/dl  | 261    | 219   | 303  | 21.00 | 42.00 |   |
| UIBC                | µmol/l | 11.3   | 9.28  | 13.3 | 1.01  | 2.02  | Direct Colorimetric                       |
|                     | µg/dl  | 63.2   | 51.9  | 74.5 | 5.65  | 11.30 |   |
| Urea                | mmol/l | 19.9   | 16.9  | 22.9 | 1.50  | 3.00  | Urease end point                          |
|                     | mg/dl  | 120    | 102   | 138  | 9.00  | 18.00 |   |
|                     | mmol/l | 19.8   | 16.9  | 22.7 | 1.45  | 2.90  | Urease kinetic                            |
|                     | mg/dl  | 119    | 102   | 136  | 8.50  | 17.00 |   |
| 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  | 9.22   | 8.01  | 10.4 | 0.61  | 1.21  |   |

**Abbott Architect c/ci Systems®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

**Range**

| Analyte           | unit   | Target | low  | high | 1SD  | 2SD  | methods   |
|-------------------|--------|--------|------|------|------|------|---|
| Uric Acid (Urate) | mmol/l | 0.55   | 0.48 | 0.62 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.21   | 8.01 | 10.4 | 0.60 | 1.20 |   |

## ABX Pentra 400®

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

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Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|----------------------|--------|--------|-------|------|-------|-------|---|
|                      |        |        | low   | high |       |       |   |
| Albumin              | g/l    | 28.5   | 24.3  | 32.7 | 2.10  | 4.20  | Bromocresol Green                                   |
|                      | g/dl   | 2.85   | 2.43  | 3.27 | 0.21  | 0.42  |   |
| Alkaline Phosphatase | U/l    | 309    | 262   | 356  | 23.50 | 47.00 | AMP optimised to IFCC 37°C                          |
| ALT (GPT)            | U/l    | 149    | 120   | 178  | 14.50 | 29.00 | Tris buffer without P5P 37°C                        |
| AST (GOT)            | U/l    | 159    | 127   | 191  | 16.00 | 32.00 | Tris buffer without P5P 37°C                        |
| Bilirubin Direct     | µmol/l | 27.7   | 21.9  | 33.5 | 2.90  | 5.80  | Diazo with Dichloroaniline (DCA)                    |
|                      | mg/dl  | 1.62   | 1.28  | 1.96 | 0.17  | 0.34  |   |
| Bilirubin Total      | µmol/l | 82.2   | 64.9  | 99.5 | 8.65  | 17.30 | Diazo with Dichloroaniline (DCA)                    |
|                      | mg/dl  | 4.81   | 3.80  | 5.82 | 0.51  | 1.01  |   |
| 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 | 3.29   | 2.96  | 3.62 | 0.17  | 0.33  | Arsenazo III  |
|                      | mg/dl  | 13.2   | 11.9  | 14.5 | 0.65  | 1.30  |   |
| Cholesterol          | mmol/l | 7.87   | 6.85  | 8.89 | 0.51  | 1.02  | Cholesterol Oxidase                                 |
|                      | mg/dl  | 304    | 264   | 344  | 20.00 | 40.00 |   |
| CK Total             | U/l    | 524    | 429   | 619  | 47.50 | 95.00 | CK-NAC (IFCC) 37°C                                  |
| Creatinine           | µmol/l | 375    | 300   | 450  | 37.50 | 75.00 | Alkaline picrate no deproteinization                |
|                      | mg/dl  | 4.24   | 3.39  | 5.09 | 0.43  | 0.85  |   |
|                      | µmol/l | 381    | 305   | 457  | 38.00 | 76.00 | Creatinine PAP method                               |
|                      | mg/dl  | 4.31   | 3.45  | 5.17 | 0.43  | 0.86  |   |
| gamma-GT             | U/l    | 176    | 150   | 202  | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |



## ABX Pentra 400®

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Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods                                   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| 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 | 15.9   | 13.5  | 18.3 | 1.20  | 2.40  | Glucose oxidase                           |
|                     | mg/dl  | 287    | 243   | 331  | 22.00 | 44.00 |   |
| Iron                | µmol/l | 35.0   | 28.7  | 41.3 | 3.15  | 6.30  | Colorimetric without ppt.                 |
|                     | µg/dl  | 196    | 160   | 232  | 18.00 | 36.00 |   |
| Magnesium           | mmol/l | 1.61   | 1.42  | 1.80 | 0.10  | 0.19  | Xylidyl Blue                              |
|                     | mg/dl  | 3.91   | 3.45  | 4.37 | 0.23  | 0.46  |   |
| Phosphate Inorganic | 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 | 6.11   | 5.62  | 6.60 | 0.25  | 0.49  | ISE method - direct                       |
| Protein Total       | g/l    | 46.0   | 36.8  | 55.2 | 4.60  | 9.20  | Biuret reaction end point                 |
|                     | g/dl   | 4.60   | 3.68  | 5.52 | 0.46  | 0.92  |   |
| Sodium              | mmol/l | 160    | 152   | 168  | 4.00  | 8.00  | ISE method - direct                       |
| Triglycerides       | mmol/l | 2.98   | 2.51  | 3.45 | 0.24  | 0.47  | Lipase/GPO-PAP no correction              |
|                     | mg/dl  | 264    | 222   | 306  | 21.00 | 42.00 |   |
| Urea                | mmol/l | 18.6   | 15.8  | 21.4 | 1.40  | 2.80  | Urease kinetic                            |
|                     | mg/dl  | 112    | 95.0  | 129  | 8.50  | 17.00 |   |
|                     | mmol/l | 18.6   | 15.8  | 21.4 | 1.40  | 2.80  | BUN                                       |
|                     | mg/dl  | 52.2   | 44.4  | 60.0 | 3.90  | 7.80  |   |
| Uric Acid (Urate)   | mmol/l | 0.55   | 0.47  | 0.62 | 0.04  | 0.07  | Uricase peroxidase with ascorbate oxidase |
|                     | mg/dl  | 9.16   | 7.96  | 10.4 | 0.60  | 1.20  |   |

## Alfa Wassermann Alfa 600/Analyticon Biolyzer 600 ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                      |
|----------------------|--------|--------|------|------|-------|-------|------------------------------|
| Albumin              | g/l    | 29.6   | 25.1 | 34.1 | 2.25  | 4.50  | Bromocresol Green            |
|                      | g/dl   | 2.96   | 2.51 | 3.41 | 0.23  | 0.45  |                              |
| Alkaline Phosphatase | U/l    | 302    | 257  | 347  | 22.50 | 45.00 | AMP optimised to IFCC 37°C   |
|                      | U/l    | 235    | 200  | 270  | 17.50 | 35.00 | AMP optimised to IFCC 30°C   |
|                      | U/l    | 193    | 164  | 222  | 14.50 | 29.00 | AMP optimised to IFCC 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 |
| AST (GOT)            | U/l    | 140    | 112  | 168  | 14.00 | 28.00 | Tris buffer without P5P 37°C |
|                      | U/l    | 95     | 76   | 114  | 9.50  | 19.00 | Tris buffer without P5P 30°C |
|                      | U/l    | 67     | 53   | 81   | 7.00  | 14.00 | Tris buffer without P5P 25°C |
| Calcium              | mmol/l | 3.09   | 2.78 | 3.40 | 0.16  | 0.31  | Arsenazo III                 |
|                      | mg/dl  | 12.4   | 11.1 | 13.7 | 0.65  | 1.30  |                              |
| Cholesterol          | mmol/l | 7.08   | 6.16 | 8.00 | 0.46  | 0.92  | Cholesterol Oxidase          |
|                      | mg/dl  | 273    | 238  | 308  | 17.50 | 35.00 |                              |
| Glucose              | mmol/l | 15.6   | 13.3 | 17.9 | 1.15  | 2.30  | Hexokinase                   |
|                      | mg/dl  | 281    | 240  | 322  | 20.50 | 41.00 |                              |
| 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  |                              |
| Triglycerides        | mmol/l | 2.83   | 2.38 | 3.28 | 0.23  | 0.45  | Lipase/GPO-PAP no correction |
|                      | mg/dl  | 250    | 211  | 289  | 19.50 | 39.00 |                              |



**Alfa Wassermann Alfa 600/Analyticon Biolyzer 600** ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte | unit   | Target | low  | high | 1SD  | 2SD   | methods        |
|---------|--------|--------|------|------|------|-------|----------------|
| Urea    | mmol/l | 18.4   | 15.7 | 21.1 | 1.35 | 2.70  | Urease kinetic |
|         | mg/dl  | 111    | 94.4 | 128  | 8.30 | 16.60 |                |
|         | mmol/l | 18.4   | 15.6 | 21.2 | 1.40 | 2.80  | BUN            |
|         | mg/dl  | 51.6   | 43.9 | 59.3 | 3.85 | 7.70  |                |

## Beckman Coulter AU Series®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                              |
|----------------------|--------|--------|-------|------|-------|-------|--------------------------------------|
|                      |        |        | low   | high |       |       |                                      |
| alpha-HBDH           | U/l    | 438    | 346   | 530  | 46.00 | 92.00 | Oxobutyrate < 10 mmol/l 37°C         |
| Albumin              | g/l    | 26.5   | 22.5  | 30.5 | 2.00  | 4.00  | Bromocresol Green                    |
|                      | g/dl   | 2.65   | 2.25  | 3.05 | 0.20  | 0.40  |                                      |
|                      | g/l    | 26.2   | 22.2  | 30.2 | 2.00  | 4.00  | Bromocresol Purple                   |
|                      | g/dl   | 2.62   | 2.22  | 3.02 | 0.20  | 0.40  |                                      |
| Alkaline Phosphatase | U/l    | 379    | 322   | 436  | 28.50 | 57.00 | AMP optimised to IFCC 37°C           |
| ALT (GPT)            | U/l    | 137    | 110   | 164  | 13.50 | 27.00 | Tris buffer without P5P 37°C         |
| Amylase Total        | U/l    | 267    | 227   | 307  | 20.00 | 40.00 | pNP Maltotriose substrates 37°C      |
|                      | U/l    | 279    | 238   | 320  | 20.50 | 41.00 | Beckman Synchron CX4/CX5/CX7 37°C    |
|                      | U/l    | 276    | 235   | 317  | 20.50 | 41.00 | Beckman Coulter - blocked pNPG7 37°C |
| AST (GOT)            | U/l    | 158    | 126   | 190  | 16.00 | 32.00 | Tris buffer without P5P 37°C         |
| Bicarbonate          | mmol/l | 17.5   | 13.9  | 21.1 | 1.80  | 3.60  | Enzymatic                            |
| Bilirubin Direct     | µmol/l | 21.5   | 17.0  | 26.0 | 2.25  | 4.50  | Dichlorophenyl Diazonium (DPD)       |
|                      | mg/dl  | 1.26   | 0.995 | 1.53 | 0.13  | 0.27  |                                      |
|                      | µmol/l | 21.4   | 16.9  | 25.9 | 2.25  | 4.50  | Diazo with Sulphanilic Acid          |
|                      | mg/dl  | 1.25   | 0.989 | 1.51 | 0.13  | 0.26  |                                      |
| Bilirubin Total      | µmol/l | 82.9   | 65.5  | 100  | 8.70  | 17.40 | Diazo with Dichloroaniline (DCA)     |
|                      | mg/dl  | 4.85   | 3.83  | 5.87 | 0.51  | 1.02  |                                      |
|                      | µmol/l | 85.4   | 67.5  | 103  | 8.95  | 17.90 | Diazo with Sulphanilic Acid          |
|                      | mg/dl  | 5.00   | 3.95  | 6.05 | 0.53  | 1.05  |                                      |
|                      | µmol/l | 84.1   | 66.4  | 102  | 8.85  | 17.70 | DPD (Beckman AU)                     |
| mg/dl                | 4.92   | 3.88   | 5.96  | 0.52 | 1.04  |       |                                      |

## Beckman Coulter AU Series®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD    | 2SD    | methods                                     |
|---------------------|--------|--------|-------|------|--------|--------|---|
|                     |        |        | low   | high |        |        |   |
| Calcium             | mmol/l | 3.07   | 2.77  | 3.37 | 0.15   | 0.30   | Cresolphthalein complexone                  |
|                     | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60   | 1.20   |   |
|                     | mmol/l | 3.07   | 2.77  | 3.37 | 0.15   | 0.30   | Arsenazo III                                |
|                     | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60   | 1.20   |   |
| Chloride            | mmol/l | 113    | 104   | 122  | 4.50   | 9.00   | ISE indirect                                |
| Cholesterol         | mmol/l | 7.63   | 6.64  | 8.62 | 0.50   | 0.99   | Cholesterol Oxidase                         |
|                     | mg/dl  | 295    | 256   | 334  | 19.50  | 39.00  |   |
| Cholinesterase      | U/l    | 4709   | 3767  | 5651 | 471.00 | 942.00 | Colorimetric Butyrylthiocholine 37°C        |
| CK Total            | U/l    | 552    | 453   | 651  | 49.50  | 99.00  | CK-NAC (IFCC) 37°C                          |
| Copper              | µmol/l | 25.4   | 20.3  | 30.5 | 2.55   | 5.10   | Colorimetric                                |
|                     | µg/dl  | 162    | 129   | 195  | 16.50  | 33.00  |   |
| Creatinine          | µmol/l | 364    | 291   | 437  | 36.50  | 73.00  | Alkaline picrate no deproteinization        |
|                     | mg/dl  | 4.11   | 3.29  | 4.93 | 0.41   | 0.82   |   |
|                     | µmol/l | 393    | 314   | 472  | 39.50  | 79.00  | Enzymatic UV method                         |
|                     | mg/dl  | 4.44   | 3.55  | 5.33 | 0.45   | 0.89   |   |
|                     | µmol/l | 390    | 312   | 468  | 39.00  | 78.00  | Creatinine PAP method                       |
|                     | mg/dl  | 4.41   | 3.53  | 5.29 | 0.44   | 0.88   |   |
|                     | µmol/l | 362    | 290   | 434  | 36.00  | 72.00  | Jaffe rate blanked                          |
|                     | mg/dl  | 4.09   | 3.28  | 4.90 | 0.41   | 0.81   |   |
|                     | µmol/l | 365    | 292   | 438  | 36.50  | 73.00  | Jaffe rate blanked compensated (-18 µmol/l) |
|                     | mg/dl  | 4.12   | 3.30  | 4.94 | 0.41   | 0.82   |   |
|                     | µmol/l | 376    | 301   | 451  | 37.50  | 75.00  | IDMS traceable                              |
|                     | mg/dl  | 4.25   | 3.40  | 5.10 | 0.43   | 0.85   |   |
| D-3-Hydroxybutyrate | mmol/l | 1.15   | 0.98  | 1.32 | 0.09   | 0.17   | Tris buffer 100mmol pH 8.5                  |

## Beckman Coulter AU Series®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD    | methods   |                        |
|-------------------|--------|--------|-------|------|-------|--------|---|------------------------|
|                   |        |        | low   | high |       |        |   |                        |
| gamma-GT          | U/l    | 181    | 154   | 208  | 13.50 | 27.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |                        |
|                   | U/l    | 165    | 140   | 190  | 12.50 | 25.00  | Gamma glutamyl-4-nitroanilide 37°C                  |                        |
|                   | U/l    | 179    | 152   | 206  | 13.50 | 27.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |                        |
| GLDH              | U/l    | 29     | 23    | 35   | 3.00  | 6.00   | Triethanolamine buffer 50 mmol 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  |   |                        |
|                   | mmol/l | 16.0   | 13.6  | 18.4 | 1.20  | 2.40   | Glucose oxidase                                     |                        |
|                   | mg/dl  | 288    | 245   | 331  | 21.50 | 43.00  |   |                        |
| HDL - Cholesterol | mmol/l | 2.76   | 2.34  | 3.18 | 0.21  | 0.42   | Direct HDL Immunoseparation                         |                        |
|                   | mg/dl  | 107    | 90.3  | 124  | 8.35  | 16.70  |   |                        |
|                   | mmol/l | 2.75   | 2.34  | 3.16 | 0.21  | 0.41   | Direct Clearance Method                             |                        |
|                   | mg/dl  | 106    | 90.3  | 122  | 7.85  | 15.70  |   |                        |
|                   | mmol/l | 2.70   | 2.29  | 3.11 | 0.21  | 0.41   | HDL - Ultra   |                        |
|                   | mg/dl  | 104    | 88.4  | 120  | 7.80  | 15.60  |   |                        |
|                   | Iron   | µmol/l | 37.5  | 30.8 | 44.2  | 3.35   | 6.70  | Colorimetric with ppt. |
|                   |        | µg/dl  | 210   | 172  | 248   | 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 | 5.49   | 4.50  | 6.48 | 0.50  | 0.99   | Colorimetric Lactate Oxidase                        |                        |
|                   | mg/dl  | 49.5   | 40.5  | 58.5 | 4.50  | 9.00   |   |                        |
| LD (LDH)          | U/l    | 353    | 300   | 406  | 26.50 | 53.00  | L->P 37°C   |                        |
|                   | U/l    | 810    | 689   | 931  | 60.50 | 121.00 | P->L Scandinavian & Dutch 37°C                      |                        |
|                   | U/l    | 359    | 305   | 413  | 27.00 | 54.00  | L->P IFCC 37°C                                      |                        |
| Lipase            | U/l    | 63     | 50    | 76   | 6.50  | 13.00  | Other Colorimetric 37°C                             |                        |
|                   | U/l    | 52     | 42    | 62   | 5.00  | 10.00  | Roche Colorimetric 37°C                             |                        |

## Beckman Coulter AU Series®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit    | Target | Range |      | 1SD   | 2SD   | methods                              |
|---------------------|---------|--------|-------|------|-------|-------|--------------------------------------|
|                     |         |        | low   | high |       |       |                                      |
| Lipase              | U/l     | 79     | 63    | 95   | 8.00  | 16.00 | Randox Colorimetric 37°C             |
| Lithium             | mmol/l  | 2.04   | 1.80  | 2.28 | 0.12  | 0.24  | Spectrophotometric                   |
|                     | mg/dl   | 1.42   | 1.25  | 1.59 | 0.09  | 0.17  |                                      |
| Magnesium           | mmol/l  | 1.75   | 1.54  | 1.96 | 0.11  | 0.21  | Xylidyl Blue                         |
|                     | mg/dl   | 4.25   | 3.74  | 4.76 | 0.26  | 0.51  |                                      |
| Osmolality          | mOsm/kg | 348    | 278   | 418  | 35.00 | 70.00 | Calculated                           |
| Phosphate Inorganic | mmol/l  | 2.22   | 1.89  | 2.55 | 0.17  | 0.33  | Phosphomolybdate UV                  |
|                     | mg/dl   | 6.88   | 5.86  | 7.90 | 0.51  | 1.02  |                                      |
| Potassium           | mmol/l  | 6.18   | 5.69  | 6.67 | 0.25  | 0.49  | ISE method - indirect                |
| Protein Total       | g/l     | 44.3   | 35.4  | 53.2 | 4.45  | 8.90  | Biuret reaction end point            |
|                     | g/dl    | 4.43   | 3.54  | 5.32 | 0.45  | 0.89  |                                      |
|                     | g/l     | 43.9   | 35.1  | 52.7 | 4.40  | 8.80  | Biuret reaction kinetic              |
|                     | g/dl    | 4.39   | 3.51  | 5.27 | 0.44  | 0.88  |                                      |
| Sodium              | mmol/l  | 159    | 151   | 167  | 4.00  | 8.00  | ISE method - indirect                |
| TIBC                | µmol/l  | 49.6   | 39.2  | 60.0 | 5.20  | 10.40 | FE+UIBC(saturation with iron)        |
|                     | µg/dl   | 277    | 219   | 335  | 29.00 | 58.00 |                                      |
| Triglycerides       | mmol/l  | 2.96   | 2.49  | 3.43 | 0.24  | 0.47  | Lipase/GPO-PAP no correction         |
|                     | mg/dl   | 262    | 220   | 304  | 21.00 | 42.00 |                                      |
|                     | mmol/l  | 2.94   | 2.47  | 3.41 | 0.24  | 0.47  | Lipase/GPO-PAP 0.11mmol/l correction |
|                     | mg/dl   | 260    | 219   | 301  | 20.50 | 41.00 |                                      |
|                     | mmol/l  | 2.97   | 2.50  | 3.44 | 0.24  | 0.47  | L/G Kinase EP. no correction         |
|                     | mg/dl   | 263    | 221   | 305  | 21.00 | 42.00 |                                      |
| 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 |                                      |

**Beckman Coulter AU Series®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD  | 2SD  | methods   |
|-------------------|--------|--------|-------|------|------|------|---|
|                   |        |        | low   | high |      |      |   |
| Urea              | 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 |   |
| Uric Acid (Urate) | mmol/l | 0.58   | 0.50  | 0.65 | 0.04 | 0.08 | Uricase peroxidase with ascorbate oxidase         |
|                   | mg/dl  | 9.71   | 8.45  | 11.0 | 0.63 | 1.26 |   |
|                   | mmol/l | 0.57   | 0.50  | 0.64 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 9.58   | 8.33  | 10.8 | 0.63 | 1.25 |   |
|                   | mmol/l | 0.57   | 0.50  | 0.64 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.56   | 8.32  | 10.8 | 0.62 | 1.24 |   |



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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

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    | 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    | 340    | 289   | 391  | 25.50 | 51.00 | AMP optimised to IFCC 37°C        |
|                      | U/l    | 340    | 289   | 391  | 25.50 | 51.00 | AMP non-optimised 37°C            |
| ALT (GPT)            | U/l    | 127    | 102   | 152  | 12.50 | 25.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 125    | 100   | 150  | 12.50 | 25.00 | Tris buffer SCE 37°C              |
| Amylase Total        | U/l    | 286    | 243   | 329  | 21.50 | 43.00 | Beckman Synchron CX4/CX5/CX7 37°C |
|                      | U/l    | 285    | 243   | 327  | 21.00 | 42.00 | Beckman Synchron AMY7 37°C        |
| AST (GOT)            | U/l    | 141    | 113   | 169  | 14.00 | 28.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 142    | 114   | 170  | 14.00 | 28.00 | Tris buffer SCE 37°C              |
| Bicarbonate          | mmol/l | 16.7   | 13.3  | 20.1 | 1.70  | 3.40  | Differential rate pH change       |
|                      | mmol/l | 16.3   | 12.9  | 19.7 | 1.70  | 3.40  | Ion selective electrode           |
| Bilirubin Direct     | µmol/l | 15.6   | 12.4  | 18.8 | 1.60  | 3.20  | Diazo with Sulphanilic Acid       |
|                      | mg/dl  | 0.913  | 0.725 | 1.10 | 0.09  | 0.19  |                                   |
| Bilirubin Total      | µmol/l | 78.1   | 61.7  | 94.5 | 8.20  | 16.40 | Diazo with Sulphanilic Acid       |
|                      | mg/dl  | 4.57   | 3.61  | 5.53 | 0.48  | 0.96  |                                   |
| Calcium              | mmol/l | 3.02   | 2.72  | 3.32 | 0.15  | 0.30  | Ion selective electrode           |
|                      | mg/dl  | 12.1   | 10.9  | 13.3 | 0.60  | 1.20  |                                   |
|                      | mmol/l | 3.05   | 2.74  | 3.36 | 0.16  | 0.31  | Arsenazo III                      |
|                      | mg/dl  | 12.2   | 11.0  | 13.4 | 0.60  | 1.20  |                                   |

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD    | methods                              |
|-------------------|--------|--------|------|------|-------|--------|--------------------------------------|
| Chloride          | mmol/l | 114    | 105  | 123  | 4.50  | 9.00   | ISE indirect                         |
| Cholesterol       | mmol/l | 7.62   | 6.63 | 8.61 | 0.50  | 0.99   | Cholesterol Oxidase                  |
|                   | mg/dl  | 294    | 256  | 332  | 19.00 | 38.00  |                                      |
| CK Total          | U/l    | 529    | 434  | 624  | 47.50 | 95.00  | CK-NAC (IFCC) 37°C                   |
|                   | U/l    | 554    | 454  | 654  | 50.00 | 100.00 | Monothioglycerol 37°C                |
| Creatinine        | µmol/l | 381    | 305  | 457  | 38.00 | 76.00  | Alkaline picrate no deproteinization |
|                   | mg/dl  | 4.31   | 3.45 | 5.17 | 0.43  | 0.86   |                                      |
|                   | µmol/l | 380    | 304  | 456  | 38.00 | 76.00  | Jaffe rate blanked                   |
|                   | mg/dl  | 4.29   | 3.44 | 5.14 | 0.43  | 0.85   |                                      |
|                   | µmol/l | 385    | 308  | 462  | 38.50 | 77.00  | IDMS traceable                       |
|                   | mg/dl  | 4.35   | 3.48 | 5.22 | 0.44  | 0.87   |                                      |
| gamma-GT          | U/l    | 145    | 123  | 167  | 11.00 | 22.00  | Gamma glutamyl-4-nitroanilide 37°C   |
| Glucose           | mmol/l | 15.3   | 13.0 | 17.6 | 1.15  | 2.30   | Hexokinase                           |
|                   | mg/dl  | 276    | 234  | 318  | 21.00 | 42.00  |                                      |
|                   | mmol/l | 15.5   | 13.2 | 17.8 | 1.15  | 2.30   | Oxygen electrode                     |
|                   | mg/dl  | 279    | 238  | 320  | 20.50 | 41.00  |                                      |
|                   | mmol/l | 15.1   | 12.9 | 17.3 | 1.10  | 2.20   | Glucose oxidase                      |
|                   | mg/dl  | 272    | 232  | 312  | 20.00 | 40.00  |                                      |
| HDL - Cholesterol | mmol/l | 2.75   | 2.34 | 3.16 | 0.21  | 0.41   | Direct HDL PPD                       |
|                   | mg/dl  | 106    | 90.3 | 122  | 7.85  | 15.70  |                                      |
|                   | mmol/l | 2.79   | 2.38 | 3.20 | 0.21  | 0.41   | HDL - Ultra                          |
|                   | mg/dl  | 108    | 91.9 | 124  | 8.05  | 16.10  |                                      |
| Iron              | µmol/l | 36.6   | 30.0 | 43.2 | 3.30  | 6.60   | Colorimetric without ppt.            |
|                   | µg/dl  | 205    | 168  | 242  | 18.50 | 37.00  |                                      |

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte                     | unit    | Target | Range |      | 1SD   | 2SD   | methods                      |
|-----------------------------|---------|--------|-------|------|-------|-------|------------------------------|
|                             |         |        | low   | high |       |       |                              |
| 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     | 302    | 257   | 347  | 22.50 | 45.00 | L->P 37°C                    |
| Lipase                      | U/l     | 63     | 50    | 76   | 6.50  | 13.00 | Other Colorimetric 37°C      |
| Lithium                     | mmol/l  | 2.00   | 1.76  | 2.24 | 0.12  | 0.24  | Spectrophotometric           |
|                             | mg/dl   | 1.39   | 1.22  | 1.56 | 0.09  | 0.17  |                              |
| Magnesium                   | mmol/l  | 1.68   | 1.48  | 1.88 | 0.10  | 0.20  | Calmagite                    |
|                             | mg/dl   | 4.08   | 3.60  | 4.56 | 0.24  | 0.48  |                              |
| Phosphate Inorganic         | mmol/l  | 2.28   | 1.94  | 2.62 | 0.17  | 0.34  | Phosphomolybdate enzymatic   |
|                             | mg/dl   | 7.07   | 6.01  | 8.13 | 0.53  | 1.06  |                              |
|                             | mmol/l  | 2.27   | 1.93  | 2.61 | 0.17  | 0.34  | Phosphomolybdate UV          |
|                             | mg/dl   | 7.04   | 5.98  | 8.10 | 0.53  | 1.06  |                              |
| Potassium                   | mmol/l  | 6.18   | 5.69  | 6.67 | 0.25  | 0.49  | ISE method - indirect        |
| Protein Total               | g/l     | 44.1   | 35.3  | 52.9 | 4.40  | 8.80  | Biuret reaction CX4/5/7      |
|                             | g/dl    | 4.41   | 3.53  | 5.29 | 0.44  | 0.88  |                              |
|                             | g/l     | 44.2   | 35.3  | 53.1 | 4.45  | 8.90  | Biuret reaction end point    |
|                             | g/dl    | 4.42   | 3.53  | 5.31 | 0.45  | 0.89  |                              |
|                             | g/l     | 42.7   | 34.1  | 51.3 | 4.30  | 8.60  | Biuret reaction kinetic      |
|                             | g/dl    | 4.27   | 3.41  | 5.13 | 0.43  | 0.86  |                              |
| Sodium                      | mmol/l  | 157    | 149   | 165  | 4.00  | 8.00  | ISE method - indirect        |
| Thyroid Stimulating Hormone | µU/ml = | 1.13   | 0.90  | 1.36 | 0.11  | 0.23  | Beckman Dxl800 Hyper TSH     |
| Triglycerides               | mmol/l  | 3.05   | 2.56  | 3.54 | 0.25  | 0.49  | Lipase/GPO-PAP no correction |
|                             | mg/dl   | 270    | 227   | 313  | 21.50 | 43.00 |                              |
|                             | mmol/l  | 3.09   | 2.60  | 3.58 | 0.25  | 0.49  | L/G Kinase EP. no correction |
|                             | mg/dl   | 273    | 230   | 316  | 21.50 | 43.00 |                              |

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte           | unit   | Target | low  | high | 1SD  | 2SD   | methods                                 |
|-------------------|--------|--------|------|------|------|-------|---|
| Urea              | mmol/l | 20.1   | 17.1 | 23.1 | 1.50 | 3.00  | Urease end point                        |
|                   | mg/dl  | 121    | 103  | 139  | 9.00 | 18.00 |   |
|                   | mmol/l | 20.1   | 17.1 | 23.1 | 1.50 | 3.00  | Urease kinetic                          |
|                   | mg/dl  | 121    | 103  | 139  | 9.00 | 18.00 |   |
|                   | mmol/l | 20.1   | 17.1 | 23.1 | 1.50 | 3.00  | BUN                                     |
|                   | mg/dl  | 56.4   | 47.9 | 64.9 | 4.25 | 8.50  |   |
| Uric Acid (Urate) | mmol/l | 0.52   | 0.46 | 0.59 | 0.03 | 0.07  | Uricase peroxidase no ascorbate oxidase |
|                   | mg/dl  | 8.80   | 7.66 | 9.94 | 0.57 | 1.14  |   |

## BIOSYSTEMS A15

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                              |
|----------------------|--------|--------|-------|------|-------|-------|--------------------------------------|
|                      |        |        | low   | high |       |       |                                      |
| Albumin              | g/l    | 29.0   | 24.6  | 33.4 | 2.20  | 4.40  | Bromocresol Green                    |
|                      | g/dl   | 2.90   | 2.46  | 3.34 | 0.22  | 0.44  |                                      |
| Alkaline Phosphatase | U/l    | 329    | 280   | 378  | 24.50 | 49.00 | AMP optimised to IFCC 37°C           |
|                      | U/l    | 256    | 218   | 294  | 19.00 | 38.00 | AMP optimised to IFCC 30°C           |
|                      | U/l    | 210    | 179   | 241  | 15.50 | 31.00 | AMP optimised to IFCC 25°C           |
| ALT (GPT)            | U/l    | 150    | 120   | 180  | 15.00 | 30.00 | Tris buffer without P5P 37°C         |
|                      | U/l    | 111    | 89    | 133  | 11.00 | 22.00 | Tris buffer without P5P 30°C         |
|                      | U/l    | 84     | 68    | 100  | 8.00  | 16.00 | Tris buffer without P5P 25°C         |
| AST (GOT)            | U/l    | 169    | 135   | 203  | 17.00 | 34.00 | Tris buffer without P5P 37°C         |
|                      | U/l    | 114    | 91    | 137  | 11.50 | 23.00 | Tris buffer without P5P 30°C         |
|                      | U/l    | 80     | 64    | 96   | 8.00  | 16.00 | Tris buffer without P5P 25°C         |
| Bilirubin Total      | µmol/l | 81.3   | 64.2  | 98.4 | 8.55  | 17.10 | Diazo with Sulphanilic Acid          |
|                      | mg/dl  | 4.76   | 3.76  | 5.76 | 0.50  | 1.00  |                                      |
| Calcium              | mmol/l | 3.19   | 2.87  | 3.51 | 0.16  | 0.32  | Arsenazo III                         |
|                      | mg/dl  | 12.8   | 11.5  | 14.1 | 0.65  | 1.30  |                                      |
| Cholesterol          | mmol/l | 7.57   | 6.59  | 8.55 | 0.49  | 0.98  | Cholesterol Oxidase                  |
|                      | mg/dl  | 292    | 254   | 330  | 19.00 | 38.00 |                                      |
| Creatinine           | µmol/l | 335    | 268   | 402  | 33.50 | 67.00 | Alkaline picrate no deproteinization |
|                      | mg/dl  | 3.79   | 3.03  | 4.55 | 0.38  | 0.76  |                                      |
| Glucose              | mmol/l | 16.2   | 13.8  | 18.6 | 1.20  | 2.40  | Glucose oxidase                      |
|                      | mg/dl  | 292    | 249   | 335  | 21.50 | 43.00 |                                      |

**BIOSYSTEMS A15**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

**Range**

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods                                   |
|---------------------|--------|--------|------|------|-------|-------|---|
| Phosphate Inorganic | 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  |   |
| Protein Total       | g/l    | 42.6   | 34.1 | 51.1 | 4.25  | 8.50  | Biuret reaction end point                 |
|                     | g/dl   | 4.26   | 3.41 | 5.11 | 0.43  | 0.85  |   |
| Triglycerides       | mmol/l | 2.95   | 2.48 | 3.42 | 0.24  | 0.47  | Lipase/GPO-PAP no correction              |
|                     | mg/dl  | 261    | 219  | 303  | 21.00 | 42.00 |   |
| Urea                | mmol/l | 18.2   | 15.5 | 20.9 | 1.35  | 2.70  | Urease kinetic                            |
|                     | mg/dl  | 109    | 93.2 | 125  | 7.90  | 15.80 |   |
|                     | mmol/l | 18.2   | 15.5 | 20.9 | 1.35  | 2.70  | BUN                                       |
|                     | mg/dl  | 51.1   | 43.4 | 58.8 | 3.85  | 7.70  |   |
| Uric Acid (Urate)   | mmol/l | 0.58   | 0.51 | 0.66 | 0.04  | 0.08  | Uricase peroxidase with ascorbate oxidase |
|                     | mg/dl  | 9.76   | 8.48 | 11.0 | 0.64  | 1.28  |   |

## BIOSYSTEMS A25

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                              |
|----------------------|--------|--------|-------|------|-------|-------|--------------------------------------|
|                      |        |        | low   | high |       |       |                                      |
| Albumin              | g/l    | 28.7   | 24.4  | 33.0 | 2.15  | 4.30  | Bromocresol Green                    |
|                      | g/dl   | 2.87   | 2.44  | 3.30 | 0.22  | 0.43  |                                      |
| Alkaline Phosphatase | U/l    | 313    | 266   | 360  | 23.50 | 47.00 | AMP optimised to IFCC 37°C           |
|                      | U/l    | 244    | 207   | 281  | 18.50 | 37.00 | AMP optimised to IFCC 30°C           |
|                      | U/l    | 200    | 170   | 230  | 15.00 | 30.00 | AMP optimised to IFCC 25°C           |
| ALT (GPT)            | U/l    | 148    | 118   | 178  | 15.00 | 30.00 | Tris buffer without P5P 37°C         |
|                      | U/l    | 110    | 87    | 133  | 11.50 | 23.00 | Tris buffer without P5P 30°C         |
|                      | U/l    | 83     | 66    | 100  | 8.50  | 17.00 | Tris buffer without P5P 25°C         |
| AST (GOT)            | U/l    | 166    | 133   | 199  | 16.50 | 33.00 | Tris buffer without P5P 37°C         |
|                      | U/l    | 112    | 90    | 134  | 11.00 | 22.00 | Tris buffer without P5P 30°C         |
|                      | U/l    | 79     | 63    | 95   | 8.00  | 16.00 | Tris buffer without P5P 25°C         |
| Bilirubin Total      | µmol/l | 80.6   | 63.6  | 97.6 | 8.50  | 17.00 | Diazo with Sulphanilic Acid          |
|                      | mg/dl  | 4.72   | 3.72  | 5.72 | 0.50  | 1.00  |                                      |
| Cholesterol          | mmol/l | 7.91   | 6.88  | 8.94 | 0.52  | 1.03  | Cholesterol Oxidase                  |
|                      | mg/dl  | 305    | 266   | 344  | 19.50 | 39.00 |                                      |
| CK Total             | U/l    | 550    | 451   | 649  | 49.50 | 99.00 | CK-NAC (IFCC) 37°C                   |
|                      | U/l    | 344    | 282   | 406  | 31.00 | 62.00 | CK-NAC (IFCC) 30°C                   |
|                      | U/l    | 234    | 192   | 276  | 21.00 | 42.00 | CK-NAC (IFCC) 25°C                   |
| Creatinine           | µmol/l | 342    | 274   | 410  | 34.00 | 68.00 | Alkaline picrate no deproteinization |
|                      | mg/dl  | 3.86   | 3.10  | 4.62 | 0.38  | 0.76  |                                      |
| Glucose              | mmol/l | 16.1   | 13.7  | 18.5 | 1.20  | 2.40  | Glucose oxidase                      |
|                      | mg/dl  | 290    | 247   | 333  | 21.50 | 43.00 |                                      |

## BIOSYSTEMS A25

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods                                   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| Phosphate Inorganic | mmol/l | 2.36   | 2.01  | 2.71 | 0.18  | 0.35  | Phosphomolybdate UV                       |
|                     | mg/dl  | 7.32   | 6.23  | 8.41 | 0.55  | 1.09  |   |
| 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  |   |
| Triglycerides       | mmol/l | 2.95   | 2.48  | 3.42 | 0.24  | 0.47  | Lipase/GPO-PAP no correction              |
|                     | mg/dl  | 261    | 219   | 303  | 21.00 | 42.00 |   |
| Urea                | mmol/l | 17.9   | 15.2  | 20.6 | 1.35  | 2.70  | Urease kinetic                            |
|                     | mg/dl  | 108    | 91.4  | 125  | 8.30  | 16.60 |   |
|                     | mmol/l | 17.9   | 15.2  | 20.6 | 1.35  | 2.70  | BUN                                       |
|                     | mg/dl  | 50.2   | 42.7  | 57.7 | 3.75  | 7.50  |   |
| Uric Acid (Urate)   | mmol/l | 0.58   | 0.50  | 0.65 | 0.04  | 0.08  | Uricase peroxidase with ascorbate oxidase |
|                     | mg/dl  | 9.68   | 8.42  | 10.9 | 0.63  | 1.26  |   |
|                     | mmol/l | 0.59   | 0.51  | 0.66 | 0.04  | 0.08  | Uricase peroxidase no ascorbate oxidase   |
|                     | mg/dl  | 9.86   | 8.58  | 11.1 | 0.64  | 1.28  |   |





## Biotechnica/Wiener BT and CB Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

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  |                                      |
| AST (GOT)         | U/l    | 154    | 123  | 185  | 15.50 | 31.00 | Tris buffer without P5P 37°C         |
|                   | U/l    | 104    | 83   | 125  | 10.50 | 21.00 | Tris buffer without P5P 30°C         |
|                   | U/l    | 73     | 59   | 87   | 7.00  | 14.00 | Tris buffer without P5P 25°C         |
| Bilirubin Total   | µmol/l | 79.9   | 63.1 | 96.7 | 8.40  | 16.80 | Dichlorophenyl Diazonium (DPD)       |
|                   | mg/dl  | 4.67   | 3.69 | 5.65 | 0.49  | 0.98  |                                      |
| Calcium           | mmol/l | 3.04   | 2.74 | 3.34 | 0.15  | 0.30  | Arsenazo III                         |
|                   | mg/dl  | 12.2   | 11.0 | 13.4 | 0.60  | 1.20  |                                      |
| Cholesterol       | mmol/l | 7.68   | 6.68 | 8.68 | 0.50  | 1.00  | Cholesterol Oxidase                  |
|                   | mg/dl  | 296    | 258  | 334  | 19.00 | 38.00 |                                      |
| Creatinine        | µmol/l | 333    | 267  | 399  | 33.00 | 66.00 | Alkaline picrate no deproteinization |
|                   | mg/dl  | 3.76   | 3.02 | 4.50 | 0.37  | 0.74  |                                      |
|                   | µmol/l | 382    | 305  | 459  | 38.50 | 77.00 | Creatinine PAP method                |
|                   | mg/dl  | 4.32   | 3.45 | 5.19 | 0.44  | 0.87  |                                      |
| Glucose           | 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 | 2.70   | 2.29 | 3.11 | 0.21  | 0.41  | Direct HDL Immunoseparation          |
|                   | mg/dl  | 104    | 88.4 | 120  | 7.80  | 15.60 |                                      |
| Iron              | µmol/l | 34.6   | 28.4 | 40.8 | 3.10  | 6.20  | Colorimetric without ppt.            |
|                   | µg/dl  | 193    | 159  | 227  | 17.00 | 34.00 |                                      |

**Biotechnica/Wiener BT and CB Series**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods                                 |
|---------------------|--------|--------|------|------|-------|-------|---|
| Phosphate Inorganic | mmol/l | 2.32   | 1.98 | 2.66 | 0.17  | 0.34  | Phosphomolybdate UV                     |
|                     | mg/dl  | 7.19   | 6.14 | 8.24 | 0.53  | 1.05  |   |
| Protein Total       | g/l    | 47.8   | 38.2 | 57.4 | 4.80  | 9.60  | Biuret reaction end point               |
|                     | g/dl   | 4.78   | 3.82 | 5.74 | 0.48  | 0.96  |   |
| 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 | 19.0   | 16.1 | 21.9 | 1.45  | 2.90  | Urease kinetic                          |
|                     | mg/dl  | 114    | 96.8 | 131  | 8.60  | 17.20 |   |
|                     | mmol/l | 19.0   | 16.2 | 21.8 | 1.40  | 2.80  | BUN                                     |
|                     | mg/dl  | 53.3   | 45.3 | 61.3 | 4.00  | 8.00  |   |
| Uric Acid (Urate)   | mmol/l | 0.56   | 0.49 | 0.63 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase |
|                     | mg/dl  | 9.41   | 8.20 | 10.6 | 0.61  | 1.21  |   |

## COBAS INTEGRA®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

### Range

| Analyte              | unit   | Target | low  | high | 1SD   | 2SD   | methods                           |
|----------------------|--------|--------|------|------|-------|-------|-----------------------------------|
| Albumin              | g/l    | 29.6   | 25.1 | 34.1 | 2.25  | 4.50  | Bromocresol Green                 |
|                      | g/dl   | 2.96   | 2.51 | 3.41 | 0.23  | 0.45  |                                   |
|                      | g/l    | 25.8   | 21.9 | 29.7 | 1.95  | 3.90  | Turbidimetric Assays              |
|                      | g/dl   | 2.58   | 2.19 | 2.97 | 0.20  | 0.39  |                                   |
| Alkaline Phosphatase | U/l    | 258    | 219  | 297  | 19.50 | 39.00 | Roche Integra AMP buffer 37°C     |
|                      | U/l    | 201    | 171  | 231  | 15.00 | 30.00 | Roche Integra AMP buffer 30°C     |
|                      | U/l    | 165    | 140  | 190  | 12.50 | 25.00 | Roche Integra AMP buffer 25°C     |
| ALT (GPT)            | U/l    | 126    | 101  | 151  | 12.50 | 25.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 93     | 75   | 111  | 9.00  | 18.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 71     | 57   | 85   | 7.00  | 14.00 | Tris buffer without P5P 25°C      |
| Amylase Pancreatic   | U/l    | 248    | 211  | 285  | 18.50 | 37.00 | Roche liquid stable pNPG7 37°C    |
| Amylase Total        | U/l    | 269    | 228  | 310  | 20.50 | 41.00 | Roche Integra 2-chloro-pNPG7 37°C |
|                      | U/l    | 269    | 228  | 310  | 20.50 | 41.00 | Roche liquid stable pNPG7 37°C    |
| AST (GOT)            | U/l    | 144    | 115  | 173  | 14.50 | 29.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 97     | 78   | 116  | 9.50  | 19.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 69     | 55   | 83   | 7.00  | 14.00 | Tris buffer without P5P 25°C      |
| Bicarbonate          | mmol/l | 16.0   | 12.7 | 19.3 | 1.65  | 3.30  | Colorimetric                      |
|                      | mmol/l | 16.3   | 12.9 | 19.7 | 1.70  | 3.40  | Enzymatic                         |
| Bilirubin Direct     | µmol/l | 28.7   | 22.6 | 34.8 | 3.05  | 6.10  | Dichlorophenyl Diazonium (DPD)    |
|                      | mg/dl  | 1.68   | 1.32 | 2.04 | 0.18  | 0.36  |                                   |
|                      | µmol/l | 28.8   | 22.7 | 34.9 | 3.05  | 6.10  | Diazo with Sulphanilic Acid       |
|                      | mg/dl  | 1.68   | 1.33 | 2.03 | 0.18  | 0.35  |                                   |

## COBAS INTEGRA®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte          | unit   | Target | Range |      | 1SD   | 2SD           | methods                                   |
|------------------|--------|--------|-------|------|-------|---------------|---|
|                  |        |        | low   | high |       |               |   |
| Bilirubin Direct | µmol/l | 28.8   | 22.8  | 34.8 | 3.00  | 6.00          | Diazo with Dichloroaniline (DCA)          |
|                  | mg/dl  | 1.68   | 1.33  | 2.03 | 0.18  | 0.35          |   |
| Bilirubin Total  | µmol/l | 71.8   | 56.8  | 86.8 | 7.50  | 15.00         | Diazo with Dichloroaniline (DCA)          |
|                  | mg/dl  | 4.20   | 3.32  | 5.08 | 0.44  | 0.88          |   |
|                  | µmol/l | 72.2   | 57.0  | 87.4 | 7.60  | 15.20         | Diazo with Sulphanilic Acid               |
|                  | mg/dl  | 4.22   | 3.33  | 5.11 | 0.45  | 0.89          |   |
|                  | µmol/l | 71.8   | 56.7  | 86.9 | 7.55  | 15.10         | Dichlorophenyl Diazonium (DPD)            |
|                  | mg/dl  | 4.20   | 3.32  | 5.08 | 0.44  | 0.88          |   |
| µmol/l           | 71.8   | 56.7   | 86.9  | 7.55 | 15.10 | Diazonium ion |   |
| mg/dl            | 4.20   | 3.32   | 5.08  | 0.44 | 0.88  |               |   |
| 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 | 3.07   | 2.76  | 3.38 | 0.16  | 0.31          | Arsenazo III                              |
|                  | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60  | 1.20          |   |
| mmol/l           | 3.11   | 2.80   | 3.42  | 0.16 | 0.31  | NM-BAPTA      |   |
| mg/dl            | 12.5   | 11.2   | 13.8  | 0.65 | 1.30  |               |   |
| Chloride         | mmol/l | 115    | 106   | 124  | 4.50  | 9.00          | ISE indirect                              |
| Cholesterol      | mmol/l | 7.58   | 6.59  | 8.57 | 0.50  | 0.99          | Cholesterol Oxidase                       |
|                  | mg/dl  | 293    | 254   | 332  | 19.50 | 39.00         |   |
| CK Total         | U/l    | 524    | 429   | 619  | 47.50 | 95.00         | CK-NAC (IFCC) 37°C                        |
|                  | U/l    | 328    | 269   | 387  | 29.50 | 59.00         | CK-NAC (IFCC) 30°C                        |
|                  | U/l    | 223    | 182   | 264  | 20.50 | 41.00         | CK-NAC (IFCC) 25°C                        |
|                  | U/l    | 532    | 436   | 628  | 48.00 | 96.00         | Creatinine phosphate substrate Start 37°C |
|                  | U/l    | 333    | 273   | 393  | 30.00 | 60.00         | Creatinine phosphate substrate Start 30°C |
|                  | U/l    | 226    | 185   | 267  | 20.50 | 41.00         | Creatinine phosphate substrate Start 25°C |

## COBAS INTEGRA®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| Creatinine        | µmol/l | 362    | 290   | 434  | 36.00 | 72.00 | Alkaline picrate with deproteinization              |
|                   | mg/dl  | 4.09   | 3.28  | 4.90 | 0.41  | 0.81  |   |
|                   | µmol/l | 375    | 300   | 450  | 37.50 | 75.00 | Alkaline picrate no deproteinization                |
|                   | mg/dl  | 4.24   | 3.39  | 5.09 | 0.43  | 0.85  |   |
|                   | µmol/l | 382    | 305   | 459  | 38.50 | 77.00 | Roche Creatinine Plus                               |
|                   | mg/dl  | 4.32   | 3.45  | 5.19 | 0.44  | 0.87  |   |
|                   | µmol/l | 362    | 290   | 434  | 36.00 | 72.00 | Jaffe rate blanked                                  |
|                   | mg/dl  | 4.09   | 3.28  | 4.90 | 0.41  | 0.81  |   |
| gamma-GT          | µmol/l | 373    | 299   | 447  | 37.00 | 74.00 | Jaffe rate blanked comp. (-26 µmol/l)               |
|                   | mg/dl  | 4.21   | 3.38  | 5.04 | 0.42  | 0.83  |   |
|                   | µmol/l | 373    | 298   | 448  | 37.50 | 75.00 | Jaffe rate blanked compensated (-18 µmol/l)         |
|                   | mg/dl  | 4.21   | 3.37  | 5.05 | 0.42  | 0.84  |   |
|                   | U/l    | 166    | 141   | 191  | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                   | U/l    | 131    | 111   | 151  | 10.00 | 20.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
| Glucose           | U/l    | 102    | 87    | 117  | 7.50  | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                   | U/l    | 181    | 154   | 208  | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                   | U/l    | 143    | 121   | 165  | 11.00 | 22.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                   | U/l    | 112    | 95    | 129  | 8.50  | 17.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
|                   | mmol/l | 15.8   | 13.4  | 18.2 | 1.20  | 2.40  | Hexokinase  |
|                   | mg/dl  | 285    | 241   | 329  | 22.00 | 44.00 |   |
| HDL - Cholesterol | mmol/l | 3.44   | 2.93  | 3.95 | 0.26  | 0.51  | Direct HDL PEGME                                    |
|                   | mg/dl  | 133    | 113   | 153  | 10.00 | 20.00 |   |
|                   | mmol/l | 3.49   | 2.97  | 4.01 | 0.26  | 0.52  | Direct HDL Roche 3rd generation                     |
|                   | mg/dl  | 135    | 115   | 155  | 10.00 | 20.00 |   |

## COBAS INTEGRA®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD    | methods                      |
|---------------------|--------|--------|-------|------|-------|--------|------------------------------|
|                     |        |        | low   | high |       |        |                              |
| Iron                | µmol/l | 36.8   | 30.2  | 43.4 | 3.30  | 6.60   | Colorimetric with ppt.       |
|                     | µg/dl  | 206    | 169   | 243  | 18.50 | 37.00  |                              |
|                     | µmol/l | 36.8   | 30.2  | 43.4 | 3.30  | 6.60   | Colorimetric without ppt.    |
|                     | µg/dl  | 206    | 169   | 243  | 18.50 | 37.00  |                              |
| Lactate             | mmol/l | 5.69   | 4.67  | 6.71 | 0.51  | 1.02   | Colorimetric Lactate Oxidase |
|                     | mg/dl  | 51.3   | 42.1  | 60.5 | 4.60  | 9.20   |                              |
| LD (LDH)            | U/l    | 679    | 577   | 781  | 51.00 | 102.00 | P->L German methods 37°C     |
|                     | U/l    | 490    | 417   | 563  | 36.50 | 73.00  | P->L German methods 30°C     |
|                     | U/l    | 344    | 293   | 395  | 25.50 | 51.00  | P->L German methods 25°C     |
|                     | U/l    | 371    | 316   | 426  | 27.50 | 55.00  | L->P IFCC 37°C               |
|                     | U/l    | 268    | 228   | 308  | 20.00 | 40.00  | L->P IFCC 30°C               |
|                     | U/l    | 188    | 160   | 216  | 14.00 | 28.00  | L->P IFCC 25°C               |
| Lipase              | U/l    | 61     | 49    | 73   | 6.00  | 12.00  | Roche Colorimetric 37°C      |
| Lithium             | mmol/l | 2.06   | 1.81  | 2.31 | 0.13  | 0.25   | Ion selective electrode      |
|                     | mg/dl  | 1.43   | 1.26  | 1.60 | 0.09  | 0.17   |                              |
| Magnesium           | mmol/l | 1.71   | 1.51  | 1.91 | 0.10  | 0.20   | Chlorphosphonazo III         |
|                     | mg/dl  | 4.16   | 3.67  | 4.65 | 0.25  | 0.49   |                              |
| Phosphate Inorganic | mmol/l | 2.20   | 1.87  | 2.53 | 0.17  | 0.33   | Phosphomolybdate enzymatic   |
|                     | mg/dl  | 6.82   | 5.80  | 7.84 | 0.51  | 1.02   |                              |
|                     | mmol/l | 2.26   | 1.92  | 2.60 | 0.17  | 0.34   | Phosphomolybdate UV          |
|                     | mg/dl  | 7.01   | 5.95  | 8.07 | 0.53  | 1.06   |                              |
| Potassium           | mmol/l | 6.25   | 5.75  | 6.75 | 0.25  | 0.50   | ISE method - indirect        |
| Protein Total       | g/l    | 42.3   | 33.9  | 50.7 | 4.20  | 8.40   | Biuret reaction end point    |
|                     | g/dl   | 4.23   | 3.39  | 5.07 | 0.42  | 0.84   |                              |
|                     | g/l    | 42.1   | 33.7  | 50.5 | 4.20  | 8.40   | Biuret reaction kinetic      |
|                     | g/dl   | 4.21   | 3.37  | 5.05 | 0.42  | 0.84   |                              |

## COBAS INTEGRA®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| Sodium            | mmol/l | 159    | 151   | 167  | 4.00  | 8.00  | ISE method - indirect                             |
| TIBC              | µmol/l | 47.6   | 37.6  | 57.6 | 5.00  | 10.00 | FE+UIBC(saturation with iron)                     |
|                   | µg/dl  | 266    | 210   | 322  | 28.00 | 56.00 |   |
| Triglycerides     | mmol/l | 2.93   | 2.46  | 3.40 | 0.24  | 0.47  | Lipase/GPO-PAP no correction                      |
|                   | mg/dl  | 259    | 218   | 300  | 20.50 | 41.00 |   |
|                   | mmol/l | 2.90   | 2.44  | 3.36 | 0.23  | 0.46  | Lipase/GPO-PAP 0.11mmol/l correction              |
|                   | mg/dl  | 257    | 216   | 298  | 20.50 | 41.00 |   |
| UIBC              | µmol/l | 11.0   | 9.05  | 13.0 | 0.98  | 1.95  | Direct Colorimetric                               |
|                   | µg/dl  | 61.5   | 50.6  | 72.4 | 5.45  | 10.90 |   |
| Urea              | mmol/l | 18.7   | 15.9  | 21.5 | 1.40  | 2.80  | Urease kinetic                                    |
|                   | mg/dl  | 112    | 95.6  | 128  | 8.20  | 16.40 |   |
|                   | mmol/l | 17.7   | 15.0  | 20.4 | 1.35  | 2.70  | Urease hypochlorite                               |
|                   | mg/dl  | 106    | 90.2  | 122  | 7.90  | 15.80 |   |
| Uric Acid (Urate) | mmol/l | 18.7   | 15.9  | 21.5 | 1.40  | 2.80  | BUN   |
|                   | mg/dl  | 52.5   | 44.6  | 60.4 | 3.95  | 7.90  |   |
|                   | 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  |   |
| Uric Acid (Urate) | mmol/l | 0.55   | 0.48  | 0.62 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 9.26   | 8.05  | 10.5 | 0.61  | 1.21  |   |
|                   | mmol/l | 0.55   | 0.48  | 0.63 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.29   | 8.08  | 10.5 | 0.61  | 1.21  |   |

## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte         | unit   | Target | Range |      | 1SD   | 2SD    | methods   |
|-----------------|--------|--------|-------|------|-------|--------|---|
|                 |        |        | low   | high |       |        |   |
| Albumin         | g/l    | 30.3   | 25.8  | 34.8 | 2.25  | 4.50   | Bromocresol Green                                   |
|                 | g/dl   | 3.03   | 2.58  | 3.48 | 0.23  | 0.45   |   |
| ALT (GPT)       | U/l    | 139    | 111   | 167  | 14.00 | 28.00  | Tris buffer without P5P 37°C                        |
| AST (GOT)       | U/l    | 145    | 116   | 174  | 14.50 | 29.00  | Tris buffer without P5P 37°C                        |
| Bilirubin Total | µmol/l | 83.2   | 65.7  | 101  | 8.75  | 17.50  | Diazo with Sulphanilic Acid                         |
|                 | mg/dl  | 4.87   | 3.84  | 5.90 | 0.52  | 1.03   |   |
| Calcium         | mmol/l | 3.07   | 2.77  | 3.37 | 0.15  | 0.30   | Arsenazo III  |
|                 | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60  | 1.20   |   |
| Cholesterol     | mmol/l | 7.76   | 6.76  | 8.76 | 0.50  | 1.00   | Cholesterol Oxidase                                 |
|                 | mg/dl  | 300    | 261   | 339  | 19.50 | 39.00  |   |
| CK Total        | U/l    | 563    | 461   | 665  | 51.00 | 102.00 | CK-NAC (IFCC) 37°C                                  |
| Creatinine      | µmol/l | 374    | 299   | 449  | 37.50 | 75.00  | Alkaline picrate no deproteinization                |
|                 | mg/dl  | 4.23   | 3.38  | 5.08 | 0.43  | 0.85   |   |
|                 | µmol/l | 343    | 274   | 412  | 34.50 | 69.00  | Jaffe rate blanked                                  |
|                 | mg/dl  | 3.88   | 3.10  | 4.66 | 0.39  | 0.78   |   |
| gamma-GT        | U/l    | 185    | 157   | 213  | 14.00 | 28.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose         | mmol/l | 16.0   | 13.6  | 18.4 | 1.20  | 2.40   | Glucose oxidase                                     |
|                 | mg/dl  | 288    | 245   | 331  | 21.50 | 43.00  |   |
| Iron            | µmol/l | 38.3   | 31.4  | 45.2 | 3.45  | 6.90   | Colorimetric without ppt.                           |
|                 | µg/dl  | 214    | 176   | 252  | 19.00 | 38.00  |   |
| LD (LDH)        | U/l    | 350    | 297   | 403  | 26.50 | 53.00  | L->P IFCC 37°C                                      |



## Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods                                 |
|---------------------|--------|--------|------|------|-------|-------|---|
| Phosphate Inorganic | mmol/l | 2.22   | 1.89 | 2.55 | 0.17  | 0.33  | Phosphomolybdate UV                     |
|                     | mg/dl  | 6.88   | 5.86 | 7.90 | 0.51  | 1.02  |   |
| Protein Total       | g/l    | 47.7   | 38.1 | 57.3 | 4.80  | 9.60  | Biuret reaction end point               |
|                     | g/dl   | 4.77   | 3.81 | 5.73 | 0.48  | 0.96  |   |
| Triglycerides       | 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 |   |
| Urea                | mmol/l | 18.6   | 15.8 | 21.4 | 1.40  | 2.80  | Urease kinetic                          |
|                     | mg/dl  | 112    | 95.0 | 129  | 8.50  | 17.00 |   |
|                     | mmol/l | 18.6   | 15.8 | 21.4 | 1.40  | 2.80  | BUN                                     |
|                     | mg/dl  | 52.2   | 44.4 | 60.0 | 3.90  | 7.80  |   |
| Uric Acid (Urate)   | mmol/l | 0.60   | 0.52 | 0.68 | 0.04  | 0.08  | Uricase peroxidase no ascorbate oxidase |
|                     | mg/dl  | 10.1   | 8.77 | 11.4 | 0.67  | 1.33  |   |

## HITACHI SERIES®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte                          | unit   | Target | Range |      | 1SD   | 2SD   | methods                                     |
|----------------------------------|--------|--------|-------|------|-------|-------|---|
|                                  |        |        | low   | high |       |       |   |
| Acid Phosphatase (non-prostatic) | U/l    | 14.8   | 9.92  | 19.7 | 2.44  | 4.88  | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| Acid Phosphatase (Prostatic)     | U/l    | 21.6   | 14.5  | 28.7 | 3.55  | 7.10  | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| Acid Phosphatase (Total)         | U/l    | 36.4   | 24.4  | 48.4 | 6.00  | 12.00 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| Albumin                          | g/l    | 28.9   | 24.6  | 33.2 | 2.15  | 4.30  | Bromocresol Green                           |
|                                  | g/dl   | 2.89   | 2.46  | 3.32 | 0.22  | 0.43  |   |
| Alkaline Phosphatase             | U/l    | 233    | 198   | 268  | 17.50 | 35.00 | Roche Integra AMP buffer 37°C               |
|                                  | U/l    | 182    | 154   | 210  | 14.00 | 28.00 | Roche Integra AMP buffer 30°C               |
|                                  | U/l    | 149    | 127   | 171  | 11.00 | 22.00 | Roche Integra AMP buffer 25°C               |
|                                  | U/l    | 332    | 282   | 382  | 25.00 | 50.00 | Randox AMP 37°C                             |
|                                  | U/l    | 259    | 220   | 298  | 19.50 | 39.00 | Randox AMP 30°C                             |
|                                  | U/l    | 212    | 180   | 244  | 16.00 | 32.00 | Randox AMP 25°C                             |
| ALT (GPT)                        | U/l    | 129    | 103   | 155  | 13.00 | 26.00 | Tris buffer without P5P 37°C                |
|                                  | U/l    | 95     | 76    | 114  | 9.50  | 19.00 | Tris buffer without P5P 30°C                |
|                                  | U/l    | 73     | 58    | 88   | 7.50  | 15.00 | Tris buffer without P5P 25°C                |
| Amylase Pancreatic               | U/l    | 282    | 240   | 324  | 21.00 | 42.00 | Randox Liquid Ethylidene pNPG7 37°C         |
| Amylase Total                    | U/l    | 256    | 217   | 295  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C              |
|                                  | U/l    | 295    | 251   | 339  | 22.00 | 44.00 | Randox Liquid Ethylidene pNPG7 37°C         |
| AST (GOT)                        | U/l    | 145    | 116   | 174  | 14.50 | 29.00 | Tris buffer without P5P 37°C                |
|                                  | U/l    | 98     | 78    | 118  | 10.00 | 20.00 | Tris buffer without P5P 30°C                |
|                                  | U/l    | 69     | 55    | 83   | 7.00  | 14.00 | Tris buffer without P5P 25°C                |
| Bicarbonate                      | mmol/l | 17.3   | 13.7  | 20.9 | 1.80  | 3.60  | Enzymatic                                   |

## HITACHI SERIES®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte          | unit   | Target | Range |      | 1SD    | 2SD     | methods                               |
|------------------|--------|--------|-------|------|--------|---------|---------------------------------------|
|                  |        |        | low   | high |        |         |                                       |
| Bile Acids       | µmol/l | 41.6   | 33.3  | 49.9 | 4.15   | 8.30    | 5th Generation Colorimetric           |
| Bilirubin Direct | µmol/l | 25.5   | 20.1  | 30.9 | 2.70   | 5.40    | Dichlorophenyl Diazonium (DPD)        |
|                  | mg/dl  | 1.49   | 1.18  | 1.80 | 0.16   | 0.31    |                                       |
|                  | µmol/l | 25.7   | 20.3  | 31.1 | 2.70   | 5.40    | Diazo with Sulphanilic Acid           |
|                  | mg/dl  | 1.50   | 1.19  | 1.81 | 0.16   | 0.31    |                                       |
| Bilirubin Total  | µmol/l | 79.2   | 62.6  | 95.8 | 8.30   | 16.60   | Diazo with Sulphanilic Acid           |
|                  | mg/dl  | 4.63   | 3.66  | 5.60 | 0.49   | 0.97    |                                       |
|                  | µmol/l | 71.0   | 56.1  | 85.9 | 7.45   | 14.90   | Dichlorophenyl Diazonium (DPD)        |
|                  | mg/dl  | 4.15   | 3.28  | 5.02 | 0.44   | 0.87    |                                       |
|                  | µmol/l | 72.3   | 57.1  | 87.5 | 7.60   | 15.20   | Diazonium ion                         |
|                  | mg/dl  | 4.23   | 3.34  | 5.12 | 0.45   | 0.89    |                                       |
| 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 | 3.12   | 2.81  | 3.43 | 0.16   | 0.31    | NM-BAPTA                              |
|                  | mg/dl  | 12.5   | 11.3  | 13.7 | 0.60   | 1.20    |                                       |
| Chloride         | mmol/l | 112    | 103   | 121  | 4.50   | 9.00    | ISE indirect                          |
| Cholesterol      | mmol/l | 7.53   | 6.55  | 8.51 | 0.49   | 0.98    | Cholesterol Oxidase                   |
|                  | mg/dl  | 291    | 253   | 329  | 19.00  | 38.00   |                                       |
| Cholinesterase   | U/l    | 5056   | 4045  | 6067 | 505.50 | 1011.00 | Colorimetric Butyrylthiocholine 37°C  |
| CK Total         | U/l    | 506    | 415   | 597  | 45.50  | 91.00   | CK-NAC (IFCC) 37°C                    |
|                  | U/l    | 317    | 260   | 374  | 28.50  | 57.00   | CK-NAC (IFCC) 30°C                    |
|                  | U/l    | 215    | 176   | 254  | 19.50  | 39.00   | CK-NAC (IFCC) 25°C                    |
| Creatinine       | µmol/l | 383    | 306   | 460  | 38.50  | 77.00   | Roche Creatinine Plus                 |
|                  | mg/dl  | 4.33   | 3.46  | 5.20 | 0.44   | 0.87    |                                       |
|                  | µmol/l | 376    | 301   | 451  | 37.50  | 75.00   | Jaffe rate blanked comp. (-26 µmol/l) |
|                  | mg/dl  | 4.25   | 3.40  | 5.10 | 0.43   | 0.85    |                                       |

## HITACHI SERIES®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD    | methods  |
|-------------------|--------|--------|-------|------|-------|--------|--|
|                   |        |        | low   | high |       |        |  |
| gamma-GT          | U/l    | 156    | 132   | 180  | 12.00 | 24.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C        |
|                   | U/l    | 123    | 104   | 142  | 9.50  | 19.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C        |
|                   | U/l    | 96     | 81    | 111  | 7.50  | 15.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C        |
|                   | U/l    | 178    | 151   | 205  | 13.50 | 27.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C  |
|                   | U/l    | 140    | 119   | 161  | 10.50 | 21.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C  |
|                   | U/l    | 110    | 93    | 127  | 8.50  | 17.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C  |
|                   | U/l    | 190    | 162   | 218  | 14.00 | 28.00  | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
|                   | U/l    | 150    | 128   | 172  | 11.00 | 22.00  | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°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 | 15.6   | 13.3  | 17.9 | 1.15  | 2.30   | Glucose oxidase                                      |
|                   | mg/dl  | 281    | 240   | 322  | 20.50 | 41.00  |  |
| HDL - Cholesterol | mmol/l | 3.45   | 2.93  | 3.97 | 0.26  | 0.52   | Direct HDL Roche 3rd generation                      |
|                   | mg/dl  | 133    | 113   | 153  | 10.00 | 20.00  |  |
| Iron              | µmol/l | 36.1   | 29.6  | 42.6 | 3.25  | 6.50   | Colorimetric without ppt.                            |
|                   | µg/dl  | 202    | 165   | 239  | 18.50 | 37.00  |  |
| Lactate           | mmol/l | 5.53   | 4.54  | 6.52 | 0.50  | 0.99   | Colorimetric Lactate Oxidase                         |
|                   | mg/dl  | 49.8   | 40.9  | 58.7 | 4.45  | 8.90   |  |
| LD (LDH)          | U/l    | 684    | 581   | 787  | 51.50 | 103.00 | P->L German methods 37°C                             |
|                   | U/l    | 494    | 419   | 569  | 37.50 | 75.00  | P->L German methods 30°C                             |
|                   | U/l    | 347    | 295   | 399  | 26.00 | 52.00  | P->L German methods 25°C                             |
|                   | U/l    | 358    | 304   | 412  | 27.00 | 54.00  | L->P IFCC 37°C                                       |
|                   | U/l    | 258    | 219   | 297  | 19.50 | 39.00  | L->P IFCC 30°C                                       |
|                   | U/l    | 182    | 154   | 210  | 14.00 | 28.00  | L->P IFCC 25°C                                       |

## HITACHI SERIES®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| Lipase              | U/l    | 55     | 44    | 66   | 5.50  | 11.00 | Roche Colorimetric 37°C                           |
| Magnesium           | mmol/l | 1.72   | 1.51  | 1.93 | 0.11  | 0.21  | Xylidyl Blue                                      |
|                     | mg/dl  | 4.18   | 3.67  | 4.69 | 0.26  | 0.51  |   |
| Phosphate Inorganic | mmol/l | 2.19   | 1.86  | 2.52 | 0.17  | 0.33  | Phosphomolybdate UV                               |
|                     | mg/dl  | 6.79   | 5.77  | 7.81 | 0.51  | 1.02  |   |
| Potassium           | mmol/l | 6.29   | 5.79  | 6.79 | 0.25  | 0.50  | ISE method - indirect                             |
| Protein Total       | g/l    | 44.0   | 35.2  | 52.8 | 4.40  | 8.80  | Biuret reaction end point                         |
|                     | g/dl   | 4.40   | 3.52  | 5.28 | 0.44  | 0.88  |   |
| Sodium              | mmol/l | 162    | 154   | 170  | 4.00  | 8.00  | ISE method - indirect                             |
| TIBC                | µmol/l | 46.1   | 36.4  | 55.8 | 4.85  | 9.70  | FE+UIBC(saturation with iron)                     |
|                     | µg/dl  | 258    | 203   | 313  | 27.50 | 55.00 |   |
| Triglycerides       | mmol/l | 2.97   | 2.49  | 3.45 | 0.24  | 0.48  | Lipase/GPO-PAP no correction                      |
|                     | mg/dl  | 263    | 220   | 306  | 21.50 | 43.00 |   |
| Urea                | 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  |   |
| Uric Acid (Urate)   | mmol/l | 0.54   | 0.47  | 0.61 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                     | mg/dl  | 9.04   | 7.86  | 10.2 | 0.59  | 1.18  |   |
|                     | mmol/l | 0.54   | 0.47  | 0.61 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                     | mg/dl  | 9.06   | 7.88  | 10.2 | 0.59  | 1.18  |   |

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                      |
|----------------------|--------|--------|-------|------|-------|-------|------------------------------|
|                      |        |        | low   | high |       |       |                              |
| Albumin              | g/l    | 27.8   | 23.6  | 32.0 | 2.10  | 4.20  | Bromocresol Green            |
|                      | g/dl   | 2.78   | 2.36  | 3.20 | 0.21  | 0.42  |                              |
| Alkaline Phosphatase | U/l    | 341    | 290   | 392  | 25.50 | 51.00 | AMP optimised to IFCC 37°C   |
|                      | U/l    | 266    | 226   | 306  | 20.00 | 40.00 | AMP optimised to IFCC 30°C   |
|                      | U/l    | 218    | 185   | 251  | 16.50 | 33.00 | AMP optimised to IFCC 25°C   |
| ALT (GPT)            | U/l    | 125    | 100   | 150  | 12.50 | 25.00 | Tris buffer without P5P 37°C |
|                      | U/l    | 93     | 74    | 112  | 9.50  | 19.00 | Tris buffer without P5P 30°C |
|                      | U/l    | 70     | 56    | 84   | 7.00  | 14.00 | Tris buffer without P5P 25°C |
| Amylase Total        | U/l    | 289    | 246   | 332  | 21.50 | 43.00 | I.L. 2-chloro-pNPG3 37°C     |
| AST (GOT)            | U/l    | 141    | 112   | 170  | 14.50 | 29.00 | Tris buffer without P5P 37°C |
|                      | U/l    | 95     | 76    | 114  | 9.50  | 19.00 | Tris buffer without P5P 30°C |
|                      | U/l    | 67     | 53    | 81   | 7.00  | 14.00 | Tris buffer without P5P 25°C |
| Bile Acids           | µmol/l | 43.0   | 34.4  | 51.6 | 4.30  | 8.60  | Enzymatic Colorimetric       |
| Bilirubin Total      | µmol/l | 82.3   | 65.0  | 99.6 | 8.65  | 17.30 | Diazo with Sulphanilic Acid  |
|                      | mg/dl  | 4.81   | 3.80  | 5.82 | 0.51  | 1.01  |                              |
| 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  |                              |
| Chloride             | mmol/l | 111    | 102   | 120  | 4.50  | 9.00  | ISE indirect                 |
| Cholesterol          | mmol/l | 7.53   | 6.55  | 8.51 | 0.49  | 0.98  | Cholesterol Oxidase          |
|                      | mg/dl  | 291    | 253   | 329  | 19.00 | 38.00 |                              |
| CK Total             | U/l    | 483    | 396   | 570  | 43.50 | 87.00 | CK-NAC (IFCC) 37°C           |
|                      | U/l    | 302    | 248   | 356  | 27.00 | 54.00 | CK-NAC (IFCC) 30°C           |
|                      | U/l    | 205    | 168   | 242  | 18.50 | 37.00 | CK-NAC (IFCC) 25°C           |

## ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| Creatinine          | µmol/l | 347    | 277   | 417  | 35.00 | 70.00 | Alkaline picrate no deproteinization                |
|                     | mg/dl  | 3.92   | 3.13  | 4.71 | 0.40  | 0.79  |   |
| D-3-Hydroxybutyrate | mmol/l | 1.15   | 0.98  | 1.32 | 0.08  | 0.17  | Tris buffer 100mmol pH 8.5                          |
| gamma-GT            | U/l    | 163    | 138   | 188  | 12.50 | 25.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                     | U/l    | 128    | 109   | 147  | 9.50  | 19.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                     | U/l    | 101    | 85    | 117  | 8.00  | 16.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                     | U/l    | 160    | 136   | 184  | 12.00 | 24.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                     | U/l    | 126    | 107   | 145  | 9.50  | 19.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                     | U/l    | 99     | 84    | 114  | 7.50  | 15.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose             | mmol/l | 16.0   | 13.6  | 18.4 | 1.20  | 2.40  | Hexokinase  |
|                     | mg/dl  | 288    | 245   | 331  | 21.50 | 43.00 |   |
|                     | mmol/l | 15.6   | 13.2  | 18.0 | 1.20  | 2.40  | Glucose oxidase                                     |
|                     | mg/dl  | 281    | 238   | 324  | 21.50 | 43.00 |   |
| Iron                | µmol/l | 36.9   | 30.3  | 43.5 | 3.30  | 6.60  | Colorimetric without ppt.                           |
|                     | µg/dl  | 206    | 169   | 243  | 18.50 | 37.00 |   |
| Magnesium           | mmol/l | 1.78   | 1.57  | 1.99 | 0.11  | 0.21  | Enzymatic   |
|                     | mg/dl  | 4.33   | 3.82  | 4.84 | 0.26  | 0.51  |   |
| Phosphate Inorganic | mmol/l | 2.19   | 1.86  | 2.52 | 0.17  | 0.33  | Phosphomolybdate UV                                 |
|                     | mg/dl  | 6.79   | 5.77  | 7.81 | 0.51  | 1.02  |   |
| Potassium           | mmol/l | 6.18   | 5.69  | 6.67 | 0.25  | 0.49  | ISE method - indirect                               |
| Protein Total       | g/l    | 44.8   | 35.9  | 53.7 | 4.45  | 8.90  | Biuret reaction end point                           |
|                     | g/dl   | 4.48   | 3.59  | 5.37 | 0.45  | 0.89  |   |
| Sodium              | mmol/l | 158    | 151   | 165  | 3.50  | 7.00  | ISE method - indirect                               |

**ILab 600®/650®/Aries/Taurus**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

**Range**

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods                                 |
|-------------------|--------|--------|------|------|-------|-------|---|
| Triglycerides     | mmol/l | 2.99   | 2.51 | 3.47 | 0.24  | 0.48  | Lipase/GPO-PAP no correction            |
|                   | mg/dl  | 265    | 222  | 308  | 21.50 | 43.00 |   |
| Urea              | mmol/l | 19.9   | 16.9 | 22.9 | 1.50  | 3.00  | Urease end point                        |
|                   | mg/dl  | 120    | 102  | 138  | 9.00  | 18.00 |   |
|                   | mmol/l | 19.9   | 16.9 | 22.9 | 1.50  | 3.00  | BUN                                     |
|                   | mg/dl  | 55.9   | 47.5 | 64.3 | 4.20  | 8.40  |   |
| Uric Acid (Urate) | mmol/l | 0.55   | 0.48 | 0.62 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase |
|                   | mg/dl  | 9.24   | 8.05 | 10.4 | 0.60  | 1.19  |   |




**JOHNSON AND JOHNSON VITROS®**
**ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)**

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                                    |
|----------------------|--------|--------|-------|------|-------|-------|--|
|                      |        |        | low   | high |       |       |  |
| Albumin              | g/l    | 27.3   | 23.2  | 31.4 | 2.05  | 4.10  | Ortho Vitros Microslide Systems            |
|                      | g/dl   | 2.73   | 2.32  | 3.14 | 0.21  | 0.41  |  |
| Alkaline Phosphatase | U/l    | 225    | 191   | 259  | 17.00 | 34.00 | Ortho Vitros Microslide Systems 37°C       |
| ALT (GPT)            | U/l    | 147    | 117   | 177  | 15.00 | 30.00 | Ortho Vitros Microslide Systems 37°C       |
| Amylase Total        | U/l    | 168    | 142   | 194  | 13.00 | 26.00 | Ortho Vitros Microslide Systems 37°C       |
| AST (GOT)            | U/l    | 189    | 151   | 227  | 19.00 | 38.00 | Ortho Vitros Microslide visible slide 37°C |
| Bicarbonate          | mmol/l | 18.6   | 14.8  | 22.4 | 1.90  | 3.80  | Ortho Vitros Microslide Systems            |
| Bilirubin Total      | µmol/l | 74.7   | 59.0  | 90.4 | 7.85  | 15.70 | Vitros 250/500/700/950 Total Bilirubin     |
|                      | mg/dl  | 4.37   | 3.45  | 5.29 | 0.46  | 0.92  |  |
|                      | µmol/l | 74.3   | 58.7  | 89.9 | 7.80  | 15.60 | Vitros 250/500/700/950 Total BUBC          |
|                      | mg/dl  | 4.35   | 3.43  | 5.27 | 0.46  | 0.92  |  |
| Calcium              | mmol/l | 3.09   | 2.78  | 3.40 | 0.16  | 0.31  | Ortho Vitros Microslide Systems            |
|                      | mg/dl  | 12.4   | 11.1  | 13.7 | 0.65  | 1.30  |  |
| Chloride             | mmol/l | 114    | 105   | 123  | 4.50  | 9.00  | Ortho Vitros Microslide Systems            |
| Cholesterol          | mmol/l | 7.05   | 6.13  | 7.97 | 0.46  | 0.92  | Ortho Vitros Microslide Systems            |
|                      | mg/dl  | 272    | 237   | 307  | 17.50 | 35.00 |  |
| CK Total             | U/l    | 463    | 380   | 546  | 41.50 | 83.00 | Ortho Vitros Microslide Systems 37°C       |
| Creatinine           | µmol/l | 385    | 308   | 462  | 38.50 | 77.00 | Vitros IDMS Traceable                      |
|                      | mg/dl  | 4.35   | 3.48  | 5.22 | 0.44  | 0.87  |  |
| gamma-GT             | U/l    | 220    | 187   | 253  | 16.50 | 33.00 | Ortho Vitros Microslide Systems 37°C       |
| Glucose              | mmol/l | 14.5   | 12.3  | 16.7 | 1.10  | 2.20  | Ortho Vitros Microslide Systems            |
|                      | mg/dl  | 261    | 222   | 300  | 19.50 | 39.00 |  |

## JOHNSON AND JOHNSON VITROS®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte                     | unit    | Target | Range |      | 1SD   | 2SD    | methods  |
|-----------------------------|---------|--------|-------|------|-------|--------|--|
|                             |         |        | low   | high |       |        |  |
| HDL - Cholesterol           | mmol/l  | 2.34   | 1.99  | 2.69 | 0.18  | 0.35   | Vitros Magnetic HDL                                    |
|                             | mg/dl   | 90.3   | 76.8  | 104  | 6.75  | 13.50  |  |
|                             | mmol/l  | 2.50   | 2.13  | 2.87 | 0.19  | 0.37   | Vitros 5.1 FS microtip assay                           |
|                             | mg/dl   | 96.5   | 82.2  | 111  | 7.15  | 14.30  |  |
|                             | mmol/l  | 2.43   | 2.07  | 2.79 | 0.18  | 0.36   | Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation |
|                             | mg/dl   | 93.8   | 79.9  | 108  | 6.95  | 13.90  |  |
| Iron                        | µmol/l  | 36.9   | 30.2  | 43.6 | 3.35  | 6.70   | Ortho Vitros Microslide Systems                        |
|                             | µg/dl   | 206    | 169   | 243  | 18.50 | 37.00  |  |
| Lactate                     | mmol/l  | 5.10   | 4.18  | 6.02 | 0.46  | 0.92   | Ortho Vitros Microslide Systems                        |
|                             | mg/dl   | 46.0   | 37.7  | 54.3 | 4.15  | 8.30   |  |
| LD (LDH)                    | U/l     | 1042   | 886   | 1198 | 78.00 | 156.00 | Ortho Vitros Microslide Systems 37°C                   |
| Lipase                      | U/l     | 689    | 553   | 825  | 68.00 | 136.00 | Ortho Vitros Microslide Systems 37°C                   |
| Lithium                     | mmol/l  | 2.48   | 2.18  | 2.78 | 0.15  | 0.30   | Ortho Vitros Microslide Systems                        |
|                             | mg/dl   | 1.72   | 1.51  | 1.93 | 0.11  | 0.21   |  |
| Magnesium                   | mmol/l  | 1.75   | 1.54  | 1.96 | 0.11  | 0.21   | Ortho Vitros Microslide Systems                        |
|                             | mg/dl   | 4.25   | 3.74  | 4.76 | 0.26  | 0.51   |  |
| Phosphate Inorganic         | mmol/l  | 2.21   | 1.88  | 2.54 | 0.17  | 0.33   | Ortho Vitros Microslide Systems                        |
|                             | mg/dl   | 6.85   | 5.83  | 7.87 | 0.51  | 1.02   |  |
| Potassium                   | mmol/l  | 6.17   | 5.68  | 6.66 | 0.25  | 0.49   | Ortho Vitros Microslide Systems                        |
| Protein Total               | g/l     | 45.6   | 36.5  | 54.7 | 4.55  | 9.10   | Ortho Vitros Microslide Systems                        |
|                             | g/dl    | 4.56   | 3.65  | 5.47 | 0.46  | 0.91   |  |
| PSA Total                   | ng/ml = | 29.9   | 22.4  | 37.4 | 3.75  | 7.50   | Ortho Vitros 3600/5600/ECi PSA II                      |
| Sodium                      | mmol/l  | 158    | 150   | 166  | 4.00  | 8.00   | Ortho Vitros Microslide Systems                        |
| Thyroid Stimulating Hormone | µU/ml = | 1.09   | 0.87  | 1.31 | 0.11  | 0.22   | Vitros ECi   |

**JOHNSON AND JOHNSON VITROS®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods                         |
|-------------------|--------|--------|------|------|-------|-------|---------------------------------|
| Total T3          | nmol/l | 5.78   | 4.34 | 7.22 | 0.72  | 1.44  | Vitros ECI                      |
|                   | ng/ml  | 3.76   | 2.83 | 4.69 | 0.47  | 0.93  |                                 |
|                   | ng/dl  | 376    | 283  | 469  | 46.50 | 93.00 | Vitros ECI                      |
| Triglycerides     | mmol/l | 3.24   | 2.72 | 3.76 | 0.26  | 0.52  | Ortho Vitros Microslide Systems |
|                   | mg/dl  | 287    | 241  | 333  | 23.00 | 46.00 |                                 |
| Urea              | mmol/l | 18.0   | 15.3 | 20.7 | 1.35  | 2.70  | Ortho Vitros Microslide Systems |
|                   | mg/dl  | 108    | 92.0 | 124  | 8.00  | 16.00 |                                 |
|                   | mmol/l | 18.0   | 15.3 | 20.7 | 1.35  | 2.70  | BUN                             |
|                   | mg/dl  | 50.5   | 42.9 | 58.1 | 3.80  | 7.60  |                                 |
| Uric Acid (Urate) | mmol/l | 0.52   | 0.45 | 0.59 | 0.03  | 0.07  | Ortho Vitros Microslide Systems |
|                   | mg/dl  | 8.74   | 7.61 | 9.87 | 0.57  | 1.13  |                                 |

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                        |
|----------------------|--------|--------|-------|------|-------|-------|--------------------------------|
|                      |        |        | low   | high |       |       |                                |
| Albumin              | g/l    | 28.4   | 24.1  | 32.7 | 2.15  | 4.30  | Bromocresol Green              |
|                      | g/dl   | 2.84   | 2.41  | 3.27 | 0.22  | 0.43  |                                |
| Alkaline Phosphatase | U/l    | 503    | 428   | 578  | 37.50 | 75.00 | Diethanolamine buffer DEA 37°C |
|                      | U/l    | 392    | 333   | 451  | 29.50 | 59.00 | Diethanolamine buffer DEA 30°C |
|                      | U/l    | 321    | 273   | 369  | 24.00 | 48.00 | Diethanolamine buffer DEA 25°C |
|                      | U/l    | 298    | 254   | 342  | 22.00 | 44.00 | AMP optimised to IFCC 37°C     |
|                      | U/l    | 232    | 198   | 266  | 17.00 | 34.00 | AMP optimised to IFCC 30°C     |
|                      | U/l    | 190    | 162   | 218  | 14.00 | 28.00 | AMP optimised to IFCC 25°C     |
| ALT (GPT)            | U/l    | 144    | 115   | 173  | 14.50 | 29.00 | Tris buffer without P5P 37°C   |
|                      | U/l    | 107    | 85    | 129  | 11.00 | 22.00 | Tris buffer without P5P 30°C   |
|                      | U/l    | 81     | 65    | 97   | 8.00  | 16.00 | Tris buffer without P5P 25°C   |
| AST (GOT)            | U/l    | 164    | 131   | 197  | 16.50 | 33.00 | Tris buffer without P5P 37°C   |
|                      | U/l    | 111    | 89    | 133  | 11.00 | 22.00 | Tris buffer without P5P 30°C   |
|                      | U/l    | 78     | 62    | 94   | 8.00  | 16.00 | Tris buffer without P5P 25°C   |
| Bilirubin Direct     | µmol/l | 26.3   | 20.8  | 31.8 | 2.75  | 5.50  | Diazo with Sulphanilic Acid    |
|                      | mg/dl  | 1.54   | 1.22  | 1.86 | 0.16  | 0.32  |                                |
| Bilirubin Total      | µmol/l | 77.5   | 61.2  | 93.8 | 8.15  | 16.30 | Diazo with Sulphanilic Acid    |
|                      | mg/dl  | 4.53   | 3.58  | 5.48 | 0.48  | 0.95  |                                |
|                      | µmol/l | 74.8   | 59.1  | 90.5 | 7.85  | 15.70 | Nitrobenzenediazonium salt     |
|                      | mg/dl  | 4.38   | 3.46  | 5.30 | 0.46  | 0.92  |                                |
| Calcium              | mmol/l | 3.21   | 2.88  | 3.54 | 0.17  | 0.33  | Arsenazo III                   |
|                      | mg/dl  | 12.9   | 11.5  | 14.3 | 0.70  | 1.40  |                                |

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD    | methods   |
|-------------------|--------|--------|-------|------|-------|--------|---|
|                   |        |        | low   | high |       |        |   |
| Chloride          | mmol/l | 115    | 106   | 124  | 4.50  | 9.00   | ISE direct  |
| Cholesterol       | mmol/l | 7.48   | 6.51  | 8.45 | 0.49  | 0.97   | Cholesterol Oxidase                                 |
|                   | mg/dl  | 289    | 251   | 327  | 19.00 | 38.00  |   |
| CK Total          | U/l    | 550    | 451   | 649  | 49.50 | 99.00  | CK-NAC (IFCC) 37°C                                  |
|                   | U/l    | 344    | 282   | 406  | 31.00 | 62.00  | CK-NAC (IFCC) 30°C                                  |
|                   | U/l    | 234    | 192   | 276  | 21.00 | 42.00  | 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 | 372    | 297   | 447  | 37.50 | 75.00  | Jaffe rate blanked                                  |
|                   | mg/dl  | 4.20   | 3.36  | 5.04 | 0.42  | 0.84   |   |
| gamma-GT          | U/l    | 174    | 148   | 200  | 13.00 | 26.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                   | U/l    | 137    | 117   | 157  | 10.00 | 20.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                   | U/l    | 107    | 91    | 123  | 8.00  | 16.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose           | mmol/l | 16.1   | 13.7  | 18.5 | 1.20  | 2.40   | Hexokinase  |
|                   | mg/dl  | 290    | 247   | 333  | 21.50 | 43.00  |   |
|                   | mmol/l | 15.9   | 13.5  | 18.3 | 1.20  | 2.40   | Glucose oxidase                                     |
|                   | mg/dl  | 287    | 243   | 331  | 22.00 | 44.00  |   |
| HDL - Cholesterol | mmol/l | 3.25   | 2.76  | 3.74 | 0.25  | 0.49   | Direct HDL PEGME                                    |
|                   | mg/dl  | 125    | 107   | 143  | 9.00  | 18.00  |   |
| Iron              | µmol/l | 37.6   | 30.8  | 44.4 | 3.40  | 6.80   | Colorimetric without ppt.                           |
|                   | µg/dl  | 210    | 172   | 248  | 19.00 | 38.00  |   |
| LD (LDH)          | U/l    | 735    | 625   | 845  | 55.00 | 110.00 | P->L Scandinavian & Dutch 37°C                      |
|                   | U/l    | 531    | 451   | 611  | 40.00 | 80.00  | P->L Scandinavian & Dutch 30°C                      |
|                   | U/l    | 373    | 317   | 429  | 28.00 | 56.00  | P->L Scandinavian & Dutch 25°C                      |

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| LD (LDH)            | U/l    | 353    | 300   | 406  | 26.50 | 53.00 | L->P IFCC 37°C                                    |
|                     | U/l    | 255    | 217   | 293  | 19.00 | 38.00 | L->P IFCC 30°C                                    |
|                     | U/l    | 179    | 152   | 206  | 13.50 | 27.00 | L->P IFCC 25°C                                    |
| Magnesium           | mmol/l | 1.62   | 1.42  | 1.82 | 0.10  | 0.20  | Xylidyl Blue                                      |
|                     | mg/dl  | 3.94   | 3.45  | 4.43 | 0.25  | 0.49  |   |
| Phosphate Inorganic | mmol/l | 2.30   | 1.95  | 2.65 | 0.18  | 0.35  | Phosphomolybdate UV                               |
|                     | mg/dl  | 7.13   | 6.05  | 8.21 | 0.54  | 1.08  |   |
| Potassium           | mmol/l | 6.09   | 5.61  | 6.57 | 0.24  | 0.48  | ISE method - direct                               |
| Protein Total       | g/l    | 45.4   | 36.3  | 54.5 | 4.55  | 9.10  | Biuret reaction end point                         |
|                     | g/dl   | 4.54   | 3.63  | 5.45 | 0.46  | 0.91  |   |
| Sodium              | mmol/l | 156    | 148   | 164  | 4.00  | 8.00  | ISE method - direct                               |
| Triglycerides       | mmol/l | 2.98   | 2.50  | 3.46 | 0.24  | 0.48  | Lipase/GPO-PAP no correction                      |
|                     | mg/dl  | 264    | 221   | 307  | 21.50 | 43.00 |   |
| Urea                | mmol/l | 18.5   | 15.8  | 21.2 | 1.35  | 2.70  | Urease kinetic                                    |
|                     | mg/dl  | 111    | 95.0  | 127  | 8.00  | 16.00 |   |
|                     | mmol/l | 18.5   | 15.7  | 21.3 | 1.40  | 2.80  | BUN   |
|                     | mg/dl  | 51.9   | 44.1  | 59.7 | 3.90  | 7.80  |   |
| Uric Acid (Urate)   | mmol/l | 0.57   | 0.50  | 0.65 | 0.04  | 0.07  | Uricase peroxidase with ascorbate oxidase         |
|                     | mg/dl  | 9.63   | 8.38  | 10.9 | 0.63  | 1.25  |   |
|                     | 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  |   |
|                     | mmol/l | 0.56   | 0.48  | 0.63 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                     | mg/dl  | 9.32   | 8.11  | 10.5 | 0.61  | 1.21  |   |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte                          | unit | Target | Range |      | 1SD   | 2SD   | methods                                     |
|----------------------------------|------|--------|-------|------|-------|-------|---|
|                                  |      |        | low   | high |       |       |   |
| alpha-HBDH                       | U/l  | 422    | 334   | 510  | 44.00 | 88.00 | Oxobutyrate < 10 mmol/l 37°C                |
|                                  | U/l  | 319    | 252   | 386  | 33.50 | 67.00 | Oxobutyrate < 10 mmol/l 30°C                |
|                                  | U/l  | 239    | 189   | 289  | 25.00 | 50.00 | Oxobutyrate < 10 mmol/l 25°C                |
| Acid Phosphatase (non-prostatic) | U/l  | 14.8   | 9.92  | 19.7 | 2.44  | 4.88  | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| Acid Phosphatase (Prostatic)     | U/l  | 21.6   | 14.5  | 28.7 | 3.55  | 7.10  | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| Acid Phosphatase (Total)         | U/l  | 36.4   | 24.4  | 48.4 | 6.00  | 12.00 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| Albumin                          | g/l  | 28.8   | 24.4  | 33.2 | 2.20  | 4.40  | Bromocresol Green                           |
|                                  | g/dl | 2.88   | 2.44  | 3.32 | 0.22  | 0.44  |   |
|                                  | g/l  | 27.0   | 23.0  | 31.0 | 2.00  | 4.00  | Bromocresol Purple                          |
|                                  | g/dl | 2.70   | 2.30  | 3.10 | 0.20  | 0.40  |   |
|                                  | g/l  | 27.3   | 23.2  | 31.4 | 2.05  | 4.10  | Ortho Vitros Microslide Systems             |
|                                  | g/dl | 2.73   | 2.32  | 3.14 | 0.21  | 0.41  |   |
|                                  | g/l  | 25.9   | 22.0  | 29.8 | 1.95  | 3.90  | Turbidimetric Assays                        |
| g/dl                             | 2.59 | 2.20   | 2.98  | 0.20 | 0.39  |       |   |
| Alkaline Phosphatase             | U/l  | 225    | 191   | 259  | 17.00 | 34.00 | Ortho Vitros Microslide Systems 37°C        |
|                                  | U/l  | 487    | 414   | 560  | 36.50 | 73.00 | Diethanolamine buffer DEA 37°C              |
|                                  | U/l  | 379    | 323   | 435  | 28.00 | 56.00 | Diethanolamine buffer DEA 30°C              |
|                                  | U/l  | 311    | 265   | 357  | 23.00 | 46.00 | Diethanolamine buffer DEA 25°C              |
|                                  | U/l  | 333    | 283   | 383  | 25.00 | 50.00 | AMP optimised to IFCC 37°C                  |
|                                  | U/l  | 259    | 220   | 298  | 19.50 | 39.00 | AMP optimised to IFCC 30°C                  |
|                                  | U/l  | 213    | 181   | 245  | 16.00 | 32.00 | AMP optimised to IFCC 25°C                  |

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit | Target | Range |      | 1SD   | 2SD                  | methods                              |
|----------------------|------|--------|-------|------|-------|----------------------|--------------------------------------|
|                      |      |        | low   | high |       |                      |                                      |
| Alkaline Phosphatase | U/l  | 319    | 271   | 367  | 24.00 | 48.00                | AMP non-optimised 37°C               |
|                      | U/l  | 249    | 211   | 287  | 19.00 | 38.00                | AMP non-optimised 30°C               |
|                      | U/l  | 204    | 173   | 235  | 15.50 | 31.00                | AMP non-optimised 25°C               |
| ALT (GPT)            | U/l  | 122    | 97    | 147  | 12.50 | 25.00                | Colorimetric 37°C                    |
|                      | U/l  | 90     | 72    | 108  | 9.00  | 18.00                | Colorimetric 30°C                    |
|                      | U/l  | 69     | 55    | 83   | 7.00  | 14.00                | Colorimetric 25°C                    |
|                      | U/l  | 147    | 117   | 177  | 15.00 | 30.00                | Ortho Vitros Microslide Systems 37°C |
|                      | U/l  | 167    | 134   | 200  | 16.50 | 33.00                | Tris buffer with P5P 37°C            |
|                      | U/l  | 124    | 99    | 149  | 12.50 | 25.00                | Tris buffer with P5P 30°C            |
|                      | U/l  | 94     | 75    | 113  | 9.50  | 19.00                | Tris buffer with P5P 25°C            |
|                      | U/l  | 131    | 105   | 157  | 13.00 | 26.00                | Tris buffer without P5P 37°C         |
|                      | U/l  | 97     | 78    | 116  | 9.50  | 19.00                | Tris buffer without P5P 30°C         |
|                      | U/l  | 74     | 59    | 89   | 7.50  | 15.00                | Tris buffer without P5P 25°C         |
|                      | U/l  | 125    | 100   | 150  | 12.50 | 25.00                | Tris buffer SCE 37°C                 |
|                      | U/l  | 93     | 74    | 112  | 9.50  | 19.00                | Tris buffer SCE 30°C                 |
| U/l                  | 70   | 56     | 84    | 7.00 | 14.00 | Tris buffer SCE 25°C |                                      |
| Amylase Pancreatic   | U/l  | 245    | 208   | 282  | 18.50 | 37.00                | Immunoinhibition EPS substrate 37°C  |
|                      | U/l  | 240    | 204   | 276  | 18.00 | 36.00                | Roche liquid stable pNPG7 37°C       |
|                      | U/l  | 282    | 240   | 324  | 21.00 | 42.00                | Randox Liquid Ethylidene pNPG7 37°C  |
| Amylase Total        | U/l  | 269    | 229   | 309  | 20.00 | 40.00                | pNP Maltotriose substrates 37°C      |
|                      | U/l  | 276    | 234   | 318  | 21.00 | 42.00                | Siemens - blocked pNPG7 37°C         |
|                      | U/l  | 225    | 191   | 259  | 17.00 | 34.00                | Randox Lyo. Ethylidene pNPG7 37°C    |
|                      | U/l  | 301    | 256   | 346  | 22.50 | 45.00                | Randox Liquid Ethylidene pNPG7 37°C  |
|                      | U/l  | 263    | 223   | 303  | 20.00 | 40.00                | BM/Roche Colorimetric pNPG7 37°C     |
|                      | U/l  | 283    | 241   | 325  | 21.00 | 42.00                | Beckman Synchron CX4/CX5/CX7 37°C    |



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte            | unit  | Target | Range |      | 1SD   | 2SD                          | methods                                    |
|--------------------|-------|--------|-------|------|-------|------------------------------|--|
|                    |       |        | low   | high |       |                              |  |
| Amylase Total      | U/l   | 323    | 275   | 371  | 24.00 | 48.00                        | Siemens - maltopenta/hexaoside 37°C        |
|                    | U/l   | 251    | 214   | 288  | 18.50 | 37.00                        | Saccharogenic 37°C                         |
|                    | U/l   | 265    | 225   | 305  | 20.00 | 40.00                        | Roche Integra 2-chloro-pNPG7 37°C          |
|                    | U/l   | 168    | 142   | 194  | 13.00 | 26.00                        | Ortho Vitros Microslide Systems 37°C       |
|                    | U/l   | 262    | 223   | 301  | 19.50 | 39.00                        | Other Roche 2-chloro-pNPG7 37°C            |
|                    | U/l   | 262    | 223   | 301  | 19.50 | 39.00                        | Roche liquid stable pNPG7 37°C             |
|                    | U/l   | 330    | 281   | 379  | 24.50 | 49.00                        | Siemens 2-chloro-pNPG3 37°C                |
|                    | U/l   | 276    | 235   | 317  | 20.50 | 41.00                        | Beckman Coulter - blocked pNPG7 37°C       |
|                    | U/l   | 285    | 243   | 327  | 21.00 | 42.00                        | Beckman Synchron AMY7 37°C                 |
|                    | U/l   | 286    | 243   | 329  | 21.50 | 43.00                        | I.L. 2-chloro-pNPG3 37°C                   |
|                    | U/l   | 306    | 260   | 352  | 23.00 | 46.00                        | Abbott Architect Non-IFCC Cal. 37°C        |
|                    | U/l   | 339    | 289   | 389  | 25.00 | 50.00                        | Abbott Architect IFCC Cal. 37°C            |
| Apolipoprotein A-1 | g/l   | 1.05   | 0.86  | 1.24 | 0.09  | 0.19                         | Immunoturbidimetric                        |
|                    | mg/dl | 105    | 86.1  | 124  | 9.45  | 18.90                        |  |
| Apolipoprotein B   | g/l   | 0.54   | 0.44  | 0.64 | 0.05  | 0.10                         | Immunoturbidimetric                        |
|                    | mg/dl | 54.1   | 44.4  | 63.8 | 4.85  | 9.70                         |  |
| AST (GOT)          | U/l   | 132    | 106   | 158  | 13.00 | 26.00                        | Colorimetric 37°C                          |
|                    | U/l   | 89     | 72    | 106  | 8.50  | 17.00                        | Colorimetric 30°C                          |
|                    | U/l   | 63     | 50    | 76   | 6.50  | 13.00                        | Colorimetric 25°C                          |
|                    | U/l   | 189    | 151   | 227  | 19.00 | 38.00                        | Ortho Vitros Microslide visible slide 37°C |
|                    | U/l   | 212    | 170   | 254  | 21.00 | 42.00                        | Tris buffer with P5P 37°C                  |
|                    | U/l   | 143    | 115   | 171  | 14.00 | 28.00                        | Tris buffer with P5P 30°C                  |
|                    | U/l   | 101    | 81    | 121  | 10.00 | 20.00                        | Tris buffer with P5P 25°C                  |
|                    | U/l   | 148    | 118   | 178  | 15.00 | 30.00                        | Tris buffer without P5P 37°C               |
|                    | U/l   | 100    | 80    | 120  | 10.00 | 20.00                        | Tris buffer without P5P 30°C               |
| U/l                | 70    | 56     | 84    | 7.00 | 14.00 | Tris buffer without P5P 25°C |  |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte          | unit   | Target | Range |      | 1SD   | 2SD   | methods                                |
|------------------|--------|--------|-------|------|-------|-------|--|
|                  |        |        | low   | high |       |       |  |
| AST (GOT)        | U/l    | 142    | 114   | 170  | 14.00 | 28.00 | Tris buffer SCE 37°C                   |
|                  | U/l    | 96     | 77    | 115  | 9.50  | 19.00 | Tris buffer SCE 30°C                   |
|                  | U/l    | 68     | 54    | 82   | 7.00  | 14.00 | Tris buffer SCE 25°C                   |
| Bicarbonate      | mmol/l | 16.5   | 13.1  | 19.9 | 1.70  | 3.40  | Colorimetric                           |
|                  | mmol/l | 18.6   | 14.8  | 22.4 | 1.90  | 3.80  | Ortho Vitros Microslide Systems        |
|                  | mmol/l | 16.7   | 13.3  | 20.1 | 1.70  | 3.40  | Differential rate pH change            |
|                  | mmol/l | 16.8   | 13.3  | 20.3 | 1.75  | 3.50  | Enzymatic                              |
|                  | mmol/l | 17.1   | 13.6  | 20.6 | 1.75  | 3.50  | Ion selective electrode                |
| Bile Acids       | µmol/l | 40.5   | 32.4  | 48.6 | 4.05  | 8.10  | 4th Generation Colorimetric            |
|                  | µmol/l | 41.6   | 33.3  | 49.9 | 4.15  | 8.30  | 5th Generation Colorimetric            |
| Bilirubin Direct | µmol/l | 26.7   | 21.1  | 32.3 | 2.80  | 5.60  | Dichlorophenyl Diazonium (DPD)         |
|                  | mg/dl  | 1.56   | 1.23  | 1.89 | 0.17  | 0.33  |  |
|                  | µmol/l | 27.0   | 21.3  | 32.7 | 2.85  | 5.70  | Diazo with Sulphanilic Acid            |
|                  | mg/dl  | 1.58   | 1.25  | 1.91 | 0.17  | 0.33  |  |
|                  | µmol/l | 28.4   | 22.5  | 34.3 | 2.95  | 5.90  | Diazo with Dichloroaniline (DCA)       |
|                  | mg/dl  | 1.66   | 1.32  | 2.00 | 0.17  | 0.34  |  |
|                  | µmol/l | 28.1   | 22.2  | 34.0 | 2.95  | 5.90  | Oxidation to Biliverdin/Vanadate       |
|                  | mg/dl  | 1.64   | 1.30  | 1.98 | 0.17  | 0.34  |  |
| Bilirubin Total  | µmol/l | 74.7   | 59.0  | 90.4 | 7.85  | 15.70 | Vitros 250/500/700/950 Total Bilirubin |
|                  | mg/dl  | 4.37   | 3.45  | 5.29 | 0.46  | 0.92  |  |
|                  | µmol/l | 74.3   | 58.7  | 89.9 | 7.80  | 15.60 | Vitros 250/500/700/950 Total BUBC      |
|                  | mg/dl  | 4.35   | 3.43  | 5.27 | 0.46  | 0.92  |  |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte         | unit   | Target | Range |      | 1SD  | 2SD   | methods                          |
|-----------------|--------|--------|-------|------|------|-------|----------------------------------|
|                 |        |        | low   | high |      |       |                                  |
| Bilirubin Total | µmol/l | 89.3   | 70.5  | 108  | 9.40 | 18.80 | Diazo with Dichloroaniline (DCA) |
|                 | mg/dl  | 5.22   | 4.12  | 6.32 | 0.55 | 1.10  |                                  |
|                 | µmol/l | 79.0   | 62.4  | 95.6 | 8.30 | 16.60 | Diazo with Sulphanilic Acid      |
|                 | mg/dl  | 4.62   | 3.65  | 5.59 | 0.49 | 0.97  |                                  |
|                 | µmol/l | 91.5   | 72.3  | 111  | 9.60 | 19.20 | Dichlorophenyl Diazonium (DPD)   |
|                 | mg/dl  | 5.35   | 4.23  | 6.47 | 0.56 | 1.12  |                                  |
|                 | µmol/l | 74.8   | 59.1  | 90.5 | 7.85 | 15.70 | Nitrobenzenediazonium salt       |
|                 | mg/dl  | 4.38   | 3.46  | 5.30 | 0.46 | 0.92  |                                  |
|                 | µmol/l | 73.6   | 58.2  | 89.0 | 7.70 | 15.40 | Diazonium ion                    |
|                 | mg/dl  | 4.31   | 3.40  | 5.22 | 0.46 | 0.91  |                                  |
|                 | µmol/l | 84.2   | 66.5  | 102  | 8.85 | 17.70 | Oxidation to Biliverdin/Vanadate |
|                 | mg/dl  | 4.93   | 3.89  | 5.97 | 0.52 | 1.04  |                                  |
|                 | µmol/l | 91.1   | 72.0  | 110  | 9.55 | 19.10 | Modified Jendrassik              |
|                 | mg/dl  | 5.33   | 4.21  | 6.45 | 0.56 | 1.12  |                                  |
| 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 | 3.09   | 2.78  | 3.40 | 0.16 | 0.31  | Ortho Vitros Microslide Systems  |
|                 | mg/dl  | 12.4   | 11.1  | 13.7 | 0.65 | 1.30  |                                  |
|                 | mmol/l | 3.02   | 2.72  | 3.32 | 0.15 | 0.30  | Ion selective electrode          |
|                 | mg/dl  | 12.1   | 10.9  | 13.3 | 0.60 | 1.20  |                                  |
|                 | mmol/l | 3.19   | 2.87  | 3.51 | 0.16 | 0.32  | Methylthymol blue                |
|                 | mg/dl  | 12.8   | 11.5  | 14.1 | 0.65 | 1.30  |                                  |
|                 | mmol/l | 3.09   | 2.78  | 3.40 | 0.16 | 0.31  | Arsenazo III                     |
|                 | mg/dl  | 12.4   | 11.1  | 13.7 | 0.65 | 1.30  |                                  |
|                 | mmol/l | 3.12   | 2.81  | 3.43 | 0.16 | 0.31  | NM-BAPTA                         |
|                 | mg/dl  | 12.5   | 11.3  | 13.7 | 0.60 | 1.20  |                                  |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte        | unit   | Target | Range |      | 1SD    | 2SD     | methods                              |
|----------------|--------|--------|-------|------|--------|---------|--------------------------------------|
|                |        |        | low   | high |        |         |                                      |
| Chloride       | mmol/l | 114    | 105   | 123  | 4.50   | 9.00    | Colorimetric                         |
|                | mmol/l | 114    | 105   | 123  | 4.50   | 9.00    | Ortho Vitros Microslide Systems      |
|                | mmol/l | 113    | 104   | 122  | 4.50   | 9.00    | ISE indirect                         |
|                | mmol/l | 114    | 105   | 123  | 4.50   | 9.00    | ISE direct                           |
| Cholesterol    | mmol/l | 7.05   | 6.13  | 7.97 | 0.46   | 0.92    | Ortho Vitros Microslide Systems      |
|                | mg/dl  | 272    | 237   | 307  | 17.50  | 35.00   |                                      |
|                | mmol/l | 7.51   | 6.53  | 8.49 | 0.49   | 0.98    | Cholesterol Oxidase                  |
|                | mg/dl  | 290    | 252   | 328  | 19.00  | 38.00   |                                      |
| Cholinesterase | U/l    | 5219   | 4175  | 6263 | 522.00 | 1044.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total       | U/l    | 463    | 380   | 546  | 41.50  | 83.00   | Ortho Vitros Microslide Systems 37°C |
|                | U/l    | 552    | 453   | 651  | 49.50  | 99.00   | CK-NAC serum start (DGKC) 37°C       |
|                | U/l    | 346    | 284   | 408  | 31.00  | 62.00   | CK-NAC serum start (DGKC) 30°C       |
|                | U/l    | 235    | 193   | 277  | 21.00  | 42.00   | CK-NAC serum start (DGKC) 25°C       |
|                | U/l    | 547    | 448   | 646  | 49.50  | 99.00   | CK-NAC substrate start (DGKC) 37°C   |
|                | U/l    | 342    | 280   | 404  | 31.00  | 62.00   | CK-NAC substrate start (DGKC) 30°C   |
|                | U/l    | 232    | 190   | 274  | 21.00  | 42.00   | CK-NAC substrate start (DGKC) 25°C   |
|                | U/l    | 535    | 438   | 632  | 48.50  | 97.00   | CK-NAC (IFCC) 37°C                   |
|                | U/l    | 335    | 274   | 396  | 30.50  | 61.00   | CK-NAC (IFCC) 30°C                   |
|                | U/l    | 227    | 186   | 268  | 20.50  | 41.00   | CK-NAC (IFCC) 25°C                   |
|                | U/l    | 554    | 454   | 654  | 50.00  | 100.00  | Monothioglycerol 37°C                |
|                | U/l    | 347    | 284   | 410  | 31.50  | 63.00   | Monothioglycerol 30°C                |
|                | U/l    | 235    | 193   | 277  | 21.00  | 42.00   | Monothioglycerol 25°C                |
| Copper         | µmol/l | 27.7   | 22.2  | 33.2 | 2.75   | 5.50    | Atomic absorption                    |
|                | µg/dl  | 176    | 141   | 211  | 17.50  | 35.00   |                                      |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |       | 1SD    | 2SD            | methods                                     |
|---------------------|--------|--------|-------|-------|--------|----------------|---|
|                     |        |        | low   | high  |        |                |   |
| Copper              | µmol/l | 25.5   | 20.4  | 30.6  | 2.55   | 5.10           | Colorimetric                                |
|                     | µg/dl  | 162    | 130   | 194   | 16.00  | 32.00          |   |
| Cortisol            | nmol/l | 992    | 744   | 1240  | 124.00 | 248.00         | Roche Cobas E411                            |
|                     | µg/dl  | 35.7   | 26.8  | 44.6  | 4.45   | 8.90           |   |
| Creatinine          | µmol/l | 342    | 274   | 410   | 34.00  | 68.00          | Alkaline picrate with deproteinization      |
|                     | mg/dl  | 3.86   | 3.10  | 4.62  | 0.38   | 0.76           |   |
|                     | µmol/l | 366    | 293   | 439   | 36.50  | 73.00          | Alkaline picrate no deproteinization        |
|                     | mg/dl  | 4.14   | 3.31  | 4.97  | 0.42   | 0.83           |   |
|                     | µmol/l | 388    | 310   | 466   | 39.00  | 78.00          | Enzymatic UV method                         |
|                     | mg/dl  | 4.38   | 3.50  | 5.26  | 0.44   | 0.88           |   |
|                     | µmol/l | 384    | 307   | 461   | 38.50  | 77.00          | Creatinine PAP method                       |
|                     | mg/dl  | 4.34   | 3.47  | 5.21  | 0.44   | 0.87           |   |
|                     | µmol/l | 373    | 299   | 447   | 37.00  | 74.00          | Jaffe rate blanked                          |
|                     | mg/dl  | 4.21   | 3.38  | 5.04  | 0.42   | 0.83           |   |
|                     | 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           |   |
|                     | µmol/l | 369    | 296   | 442   | 36.50  | 73.00          | Jaffe rate blanked compensated (-18 µmol/l) |
|                     | mg/dl  | 4.17   | 3.34  | 5.00  | 0.42   | 0.83           |   |
|                     | µmol/l | 385    | 308   | 462   | 38.50  | 77.00          | Vitros IDMS Traceable                       |
|                     | mg/dl  | 4.35   | 3.48  | 5.22  | 0.44   | 0.87           |   |
| µmol/l              | 382    | 306    | 458   | 38.00 | 76.00  | IDMS traceable |   |
| mg/dl               | 4.32   | 3.46   | 5.18  | 0.43  | 0.86   |                |   |
| D-3-Hydroxybutyrate | mmol/l | 1.16   | 0.99  | 1.33  | 0.09   | 0.17           | Tris buffer 100mmol pH 8.5                  |
| Digoxin             | nmol/l | 3.61   | 2.89  | 4.33  | 0.36   | 0.72           | Immunoturbidimetric                         |
|                     | ng/ml  | 2.82   | 2.26  | 3.38  | 0.28   | 0.56           |   |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte | unit   | Target | Range |       |       | 1SD                | 2SD                            | methods |
|---------|--------|--------|-------|-------|-------|--------------------|--------------------------------|---------|
|         |        |        | low   | high  |       |                    |                                |         |
| Folate  | nmol/l | 17.4   | 13.3  | 21.6  | 2.07  | 4.14               | Roche Cobas E411               |         |
|         | ng/ml  | 7.69   | 5.87  | 9.51  | 0.91  | 1.82               |                                |         |
| Free T4 | pmol/l | 50.3   | 37.7  | 62.9  | 6.30  | 12.60              | Abbott Architect               |         |
|         | ng/dl  | 3.92   | 2.94  | 4.90  | 0.49  | 0.98               |                                |         |
|         | pg/ml  | 39.2   | 29.4  | 49.0  | 4.90  | 9.80               | Abbott Architect               |         |
|         | pmol/l | 68.2   | 51.2  | 85.2  | 8.50  | 17.00              | Siemens Centaur XP/XPT/Classic |         |
|         | ng/dl  | 5.32   | 3.99  | 6.65  | 0.67  | 1.33               |                                |         |
|         | pg/ml  | 53.2   | 39.9  | 66.5  | 6.65  | 13.30              | Siemens Centaur XP/XPT/Classic |         |
|         | pmol/l | 63.7   | 47.8  | 79.6  | 7.95  | 15.90              | Beckman Access                 |         |
|         | ng/dl  | 4.97   | 3.73  | 6.21  | 0.62  | 1.24               |                                |         |
|         | pg/ml  | 49.7   | 37.3  | 62.1  | 6.20  | 12.40              | Beckman Access                 |         |
|         | pmol/l | 63.6   | 47.7  | 79.5  | 7.95  | 15.90              | Beckman Dxl800                 |         |
|         | ng/dl  | 4.96   | 3.72  | 6.20  | 0.62  | 1.24               |                                |         |
|         | pg/ml  | 49.6   | 37.2  | 62.0  | 6.20  | 12.40              | Beckman Dxl800                 |         |
|         | pmol/l | 76.4   | 57.3  | 95.5  | 9.55  | 19.10              | Siemens Immulite 1000          |         |
|         | ng/dl  | 5.96   | 4.47  | 7.45  | 0.75  | 1.49               |                                |         |
|         | pg/ml  | 59.6   | 44.7  | 74.5  | 7.45  | 14.90              | Siemens Immulite 1000          |         |
|         | pmol/l | 71.7   | 53.8  | 89.6  | 8.95  | 17.90              | Siemens Immulite 2000/2500     |         |
|         | ng/dl  | 5.59   | 4.20  | 6.98  | 0.70  | 1.39               |                                |         |
|         | pg/ml  | 55.9   | 42.0  | 69.8  | 6.95  | 13.90              | Siemens Immulite 2000/2500     |         |
|         | pmol/l | 78.2   | 58.7  | 97.7  | 9.75  | 19.50              | Roche Elecsys                  |         |
|         | ng/dl  | 6.10   | 4.58  | 7.62  | 0.76  | 1.52               |                                |         |
| pg/ml   | 61.0   | 45.8   | 76.2  | 7.60  | 15.20 | Roche Elecsys      |                                |         |
| pmol/l  | 80.3   | 60.3   | 100   | 10.00 | 20.00 | Roche Modular E170 |                                |         |
| ng/dl   | 6.26   | 4.70   | 7.82  | 0.78  | 1.56  |                    |                                |         |
| pg/ml   | 62.6   | 47.0   | 78.2  | 7.80  | 15.60 | Roche Modular E170 |                                |         |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

### Range

| Analyte    | unit   | Target | low  | high | 1SD   | 2SD  | methods  |
|------------|--------|--------|------|------|-------|--|--|
| Free T4    | pmol/l | 76.2   | 57.1 | 95.3 | 9.55  | 19.10  | Roche Cobas E411                                     |
|            | ng/dl  | 5.94   | 4.45 | 7.43 | 0.75  | 1.49   |  |
|            | pg/ml  | 59.4   | 44.5 | 74.3 | 7.45  | 14.90  | Roche Cobas E411                                     |
|            | pmol/l | 77.9   | 58.4 | 97.4 | 9.75  | 19.50  | Roche Cobas 6000/8000                                |
|            | ng/dl  | 6.08   | 4.56 | 7.60 | 0.76  | 1.52   |  |
|            | pg/ml  | 60.8   | 45.6 | 76.0 | 7.60  | 15.20  | Roche Cobas 6000/8000                                |
|            | pmol/l | 73.0   | 54.8 | 91.2 | 9.10  | 18.20  | Biomerieux Vidas FT4N Kit                            |
|            | ng/dl  | 5.69   | 4.27 | 7.11 | 0.71  | 1.42   |  |
| Gentamicin | µmol/l | 17.6   | 14.1 | 21.1 | 1.75  | 3.50   | Immunturbidimetric                                   |
|            | µg/ml  | 8.41   | 6.74 | 10.1 | 0.84  | 1.67   |  |
| gamma-GT   | U/l    | 170    | 145  | 195  | 12.50 | 25.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C        |
|            | U/l    | 134    | 114  | 154  | 10.00 | 20.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C        |
|            | U/l    | 105    | 89   | 121  | 8.00  | 16.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C        |
|            | U/l    | 220    | 187  | 253  | 16.50 | 33.00  | Ortho Vitros Microslide Systems 37°C                 |
|            | U/l    | 145    | 123  | 167  | 11.00 | 22.00  | Gamma glutamyl-4-nitroanilide 37°C                   |
|            | U/l    | 114    | 97   | 131  | 8.50  | 17.00  | Gamma glutamyl-4-nitroanilide 30°C                   |
|            | U/l    | 89     | 76   | 102  | 6.50  | 13.00  | Gamma glutamyl-4-nitroanilide 25°C                   |
|            | U/l    | 180    | 153  | 207  | 13.50 | 27.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C  |
|            | U/l    | 142    | 121  | 163  | 10.50 | 21.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C  |
|            | U/l    | 111    | 94   | 128  | 8.50  | 17.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C  |
|            | U/l    | 190    | 162  | 218  | 14.00 | 28.00  | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
|            | U/l    | 150    | 128  | 172  | 11.00 | 22.00  | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| U/l        | 117    | 100    | 134  | 8.50 | 17.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |  |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods  |
|-------------------|--------|--------|-------|------|-------|-------|--|
|                   |        |        | low   | high |       |       |  |
| GLDH              | U/l    | 29     | 23    | 35   | 3.00  | 6.00  | Triethanolamine buffer 50 mmol 37°C                    |
|                   | U/l    | 22     | 18    | 26   | 2.00  | 4.00  | Triethanolamine buffer 50 mmol 30°C                    |
|                   | U/l    | 18     | 14    | 22   | 2.00  | 4.00  | Triethanolamine buffer 50 mmol 25°C                    |
| Glucose           | mmol/l | 14.5   | 12.3  | 16.7 | 1.10  | 2.20  | Ortho Vitros Microslide Systems                        |
|                   | mg/dl  | 261    | 222   | 300  | 19.50 | 39.00 |  |
|                   | mmol/l | 16.0   | 13.6  | 18.4 | 1.20  | 2.40  | Glucose dehydrogenase                                  |
|                   | mg/dl  | 288    | 245   | 331  | 21.50 | 43.00 |  |
|                   | mmol/l | 15.8   | 13.4  | 18.2 | 1.20  | 2.40  | Hexokinase   |
|                   | mg/dl  | 285    | 241   | 329  | 22.00 | 44.00 |  |
|                   | mmol/l | 15.5   | 13.2  | 17.8 | 1.15  | 2.30  | Oxygen electrode                                       |
|                   | mg/dl  | 279    | 238   | 320  | 20.50 | 41.00 |  |
| HDL - Cholesterol | mmol/l | 2.81   | 2.38  | 3.24 | 0.22  | 0.43  | Direct HDL PPD   |
|                   | mg/dl  | 108    | 91.9  | 124  | 8.05  | 16.10 |  |
|                   | mmol/l | 2.74   | 2.33  | 3.15 | 0.21  | 0.41  | Direct HDL Immunoseparation                            |
|                   | mg/dl  | 106    | 89.9  | 122  | 8.05  | 16.10 |  |
|                   | mmol/l | 2.34   | 1.99  | 2.69 | 0.18  | 0.35  | Vitros Magnetic HDL                                    |
|                   | mg/dl  | 90.3   | 76.8  | 104  | 6.75  | 13.50 |  |
|                   | mmol/l | 3.32   | 2.82  | 3.82 | 0.25  | 0.50  | Direct HDL PEGME                                       |
|                   | mg/dl  | 128    | 109   | 147  | 9.50  | 19.00 |  |
|                   | mmol/l | 2.68   | 2.28  | 3.08 | 0.20  | 0.40  | Direct Clearance Method                                |
|                   | mg/dl  | 103    | 88.0  | 118  | 7.50  | 15.00 |  |
|                   | mmol/l | 2.43   | 2.07  | 2.79 | 0.18  | 0.36  | Vitros dHDL PTA/MgCl <sub>2</sub> direct precipitation |
|                   | mg/dl  | 93.8   | 79.9  | 108  | 6.95  | 13.90 |  |



## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |       | 1SD   | 2SD                             | methods                         |
|-------------------|--------|--------|-------|-------|-------|---------------------------------|---------------------------------|
|                   |        |        | low   | high  |       |                                 |                                 |
| HDL - Cholesterol | mmol/l | 3.35   | 2.84  | 3.86  | 0.26  | 0.51                            | Direct HDL Roche 3rd generation |
|                   | mg/dl  | 129    | 110   | 148   | 9.50  | 19.00                           |                                 |
|                   | mmol/l | 2.64   | 2.24  | 3.04  | 0.20  | 0.40                            | HDL - Ultra                     |
|                   | mg/dl  | 102    | 86.5  | 118   | 7.75  | 15.50                           |                                 |
| Immunoglobulin A  | g/l    | 1.47   | 1.10  | 1.84  | 0.19  | 0.37                            | Immunoturbidimetric             |
|                   | mg/dl  | 147    | 110   | 184   | 18.50 | 37.00                           |                                 |
| Immunoglobulin G  | g/l    | 5.31   | 4.35  | 6.27  | 0.48  | 0.96                            | Immunoturbidimetric             |
|                   | mg/dl  | 531    | 435   | 627   | 48.00 | 96.00                           |                                 |
| Immunoglobulin M  | g/l    | 0.76   | 0.61  | 0.91  | 0.08  | 0.15                            | Immunoturbidimetric             |
|                   | mg/dl  | 75.9   | 60.7  | 91.1  | 7.60  | 15.20                           |                                 |
| 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 | 36.6   | 30.0  | 43.2  | 3.30  | 6.60                            | Colorimetric without ppt.       |
|                   | µg/dl  | 205    | 168   | 242   | 18.50 | 37.00                           |                                 |
|                   | µmol/l | 36.9   | 30.2  | 43.6  | 3.35  | 6.70                            |                                 |
| µg/dl             | 206    | 169    | 243   | 18.50 | 37.00 | Ortho Vitros Microslide Systems |                                 |
| Lactate           | mmol/l | 5.08   | 4.17  | 5.99  | 0.46  | 0.91                            | Ion selective electrode         |
|                   | mg/dl  | 45.8   | 37.6  | 54.0  | 4.10  | 8.20                            |                                 |
|                   | mmol/l | 5.50   | 4.51  | 6.49  | 0.50  | 0.99                            | Colorimetric Lactate Oxidase    |
|                   | mg/dl  | 49.6   | 40.6  | 58.6  | 4.50  | 9.00                            |                                 |
|                   | mmol/l | 5.10   | 4.18  | 6.02  | 0.46  | 0.92                            | Ortho Vitros Microslide Systems |
|                   | mg/dl  | 46.0   | 37.7  | 54.3  | 4.15  | 8.30                            |                                 |
|                   | mmol/l | 5.30   | 4.35  | 6.25  | 0.48  | 0.95                            | Enzymatic Electrode             |
|                   | mg/dl  | 47.8   | 39.2  | 56.4  | 4.30  | 8.60                            |                                 |
| mmol/l            | 5.52   | 4.53   | 6.51  | 0.50  | 0.99  | UV LDH                          |                                 |
| mg/dl             | 49.7   | 40.8   | 58.6  | 4.45  | 8.90  |                                 |                                 |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte  | unit   | Target | Range |       | 1SD   | 2SD            | methods                                 |
|----------|--------|--------|-------|-------|-------|----------------|---|
|          |        |        | low   | high  |       |                |   |
| LAP      | U/l    | 14     | 12    | 16    | 1.00  | 2.00           | NAGEL 37°C                              |
| LD (LDH) | U/l    | 1042   | 886   | 1198  | 78.00 | 156.00         | Ortho Vitros Microslide Systems 37°C    |
|          | U/l    | 327    | 278   | 376   | 24.50 | 49.00          | L->P 37°C                               |
|          | U/l    | 236    | 201   | 271   | 17.50 | 35.00          | L->P 30°C                               |
|          | U/l    | 166    | 141   | 191   | 12.50 | 25.00          | L->P 25°C                               |
|          | U/l    | 793    | 674   | 912   | 59.50 | 119.00         | P->L Scandinavian & Dutch 37°C          |
|          | U/l    | 573    | 487   | 659   | 43.00 | 86.00          | P->L Scandinavian & Dutch 30°C          |
|          | U/l    | 402    | 342   | 462   | 30.00 | 60.00          | P->L Scandinavian & Dutch 25°C          |
|          | U/l    | 698    | 594   | 802   | 52.00 | 104.00         | P->L German methods 37°C                |
|          | U/l    | 504    | 429   | 579   | 37.50 | 75.00          | P->L German methods 30°C                |
|          | U/l    | 354    | 301   | 407   | 26.50 | 53.00          | P->L German methods 25°C                |
|          | U/l    | 695    | 591   | 799   | 52.00 | 104.00         | P->L SFBC 37°C                          |
|          | U/l    | 502    | 427   | 577   | 37.50 | 75.00          | P->L SFBC 30°C                          |
|          | U/l    | 352    | 300   | 404   | 26.00 | 52.00          | P->L SFBC 25°C                          |
|          | U/l    | 363    | 309   | 417   | 27.00 | 54.00          | L->P IFCC 37°C                          |
| U/l      | 262    | 223    | 301   | 19.50 | 39.00 | L->P IFCC 30°C |   |
| U/l      | 184    | 157    | 211   | 13.50 | 27.00 | L->P IFCC 25°C |   |
| Lipase   | U/l    | 61     | 49    | 73    | 6.00  | 12.00          | Other Colorimetric 37°C                 |
|          | U/l    | 689    | 553   | 825   | 68.00 | 136.00         | Ortho Vitros Microslide Systems 37°C    |
|          | U/l    | 54     | 44    | 64    | 5.00  | 10.00          | Roche Colorimetric 37°C                 |
|          | U/l    | 82     | 66    | 98    | 8.00  | 16.00          | Randox Colorimetric 37°C                |
|          | U/l    | 421    | 338   | 504   | 41.50 | 83.00          | Randox Turbidimetric with colipase 37°C |
| Lithium  | mmol/l | 2.48   | 2.18  | 2.78  | 0.15  | 0.30           | Ortho Vitros Microslide Systems         |
|          | mg/dl  | 1.72   | 1.51  | 1.93  | 0.11  | 0.21           |   |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte     | unit      | Target | Range |      | 1SD   | 2SD   | methods                         |              |
|-------------|-----------|--------|-------|------|-------|-------|---------------------------------|--------------|
|             |           |        | low   | high |       |       |                                 |              |
| Lithium     | mmol/l    | 2.10   | 1.84  | 2.36 | 0.13  | 0.26  | Ion selective electrode         |              |
|             | mg/dl     | 1.46   | 1.28  | 1.64 | 0.09  | 0.18  |                                 |              |
|             | mmol/l    | 2.02   | 1.78  | 2.26 | 0.12  | 0.24  | Spectrophotometric              |              |
|             | mg/dl     | 1.40   | 1.24  | 1.56 | 0.08  | 0.16  |                                 |              |
|             | mmol/l    | 1.93   | 1.70  | 2.16 | 0.12  | 0.23  | Randox Colorimetric             |              |
|             | mg/dl     | 1.34   | 1.18  | 1.50 | 0.08  | 0.16  |                                 |              |
|             | Magnesium | mmol/l | 1.69  | 1.49 | 1.89  | 0.10  | 0.20                            | Arsenazo III |
|             |           | mg/dl  | 4.11  | 3.62 | 4.60  | 0.25  | 0.49                            |              |
| mmol/l      |           | 1.75   | 1.54  | 1.96 | 0.11  | 0.21  | Ortho Vitros Microslide Systems |              |
| mg/dl       |           | 4.25   | 3.74  | 4.76 | 0.26  | 0.51  |                                 |              |
| mmol/l      |           | 1.68   | 1.48  | 1.88 | 0.10  | 0.20  | Calmagite                       |              |
| mg/dl       |           | 4.08   | 3.60  | 4.56 | 0.24  | 0.48  |                                 |              |
| mmol/l      |           | 1.72   | 1.52  | 1.92 | 0.10  | 0.20  | Xylidyl Blue                    |              |
| mg/dl       |           | 4.18   | 3.69  | 4.67 | 0.25  | 0.49  |                                 |              |
| mmol/l      |           | 1.74   | 1.53  | 1.95 | 0.11  | 0.21  | Methylthymol blue               |              |
| mg/dl       |           | 4.23   | 3.72  | 4.74 | 0.26  | 0.51  |                                 |              |
| mmol/l      |           | 1.72   | 1.51  | 1.93 | 0.11  | 0.21  | Chlorphosphonazo III            |              |
| mg/dl       |           | 4.18   | 3.67  | 4.69 | 0.26  | 0.51  |                                 |              |
| mmol/l      |           | 1.72   | 1.52  | 1.92 | 0.10  | 0.20  | Enzymatic                       |              |
| mg/dl       |           | 4.18   | 3.69  | 4.67 | 0.25  | 0.49  |                                 |              |
| NEFA        | mmol/l    | 0.52   | 0.44  | 0.60 | 0.04  | 0.08  | Colorimetric                    |              |
| Osmolality  | mOsm/kg   | 340    | 272   | 408  | 34.00 | 68.00 | Calculated                      |              |
|             | mOsm/kg   | 380    | 304   | 456  | 38.00 | 76.00 | Freezing point depression       |              |
| Paracetamol | mmol/l    | 0.63   | 0.50  | 0.75 | 0.06  | 0.13  | Colorimetric                    |              |
|             | mg/l      | 94.8   | 75.8  | 114  | 9.50  | 19.00 |                                 |              |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit      | Target | Range |      | 1SD  | 2SD  | methods                                  |                                 |
|---------------------|-----------|--------|-------|------|------|------|--|---------------------------------|
|                     |           |        | low   | high |      |      |  |                                 |
| Phosphate Inorganic | mmol/l    | 2.21   | 1.88  | 2.54 | 0.17 | 0.33 | Ortho Vitros Microslide Systems          |                                 |
|                     | mg/dl     | 6.85   | 5.83  | 7.87 | 0.51 | 1.02 |  |                                 |
|                     | mmol/l    | 2.21   | 1.88  | 2.54 | 0.17 | 0.33 | Phosphomolybdate enzymatic               |                                 |
|                     | mg/dl     | 6.85   | 5.83  | 7.87 | 0.51 | 1.02 |  |                                 |
|                     | mmol/l    | 2.22   | 1.89  | 2.55 | 0.17 | 0.33 | Phosphomolybdate UV                      |                                 |
|                     | mg/dl     | 6.88   | 5.86  | 7.90 | 0.51 | 1.02 |  |                                 |
|                     | Potassium | mmol/l | 6.17  | 5.68 | 6.66 | 0.25 | 0.49                                     | Ortho Vitros Microslide Systems |
|                     |           | mmol/l | 6.29  | 5.79 | 6.79 | 0.25 | 0.50                                     | Enzymatic                       |
| mmol/l              |           | 5.91   | 5.44  | 6.38 | 0.24 | 0.47 | Flame photometry                         |                                 |
| mmol/l              |           | 6.16   | 5.67  | 6.65 | 0.25 | 0.49 | ISE method - direct                      |                                 |
| mmol/l              |           | 6.24   | 5.74  | 6.74 | 0.25 | 0.50 | ISE method - indirect                    |                                 |
| Protein Total       | g/l       | 45.6   | 36.5  | 54.7 | 4.55 | 9.10 | Ortho Vitros Microslide Systems          |                                 |
|                     | g/dl      | 4.56   | 3.65  | 5.47 | 0.46 | 0.91 |  |                                 |
|                     | g/l       | 44.6   | 35.7  | 53.5 | 4.45 | 8.90 | Biuret reaction end point                |                                 |
|                     | g/dl      | 4.46   | 3.57  | 5.35 | 0.45 | 0.89 |  |                                 |
|                     | g/l       | 43.1   | 34.5  | 51.7 | 4.30 | 8.60 | Biuret reaction kinetic                  |                                 |
|                     | g/dl      | 4.31   | 3.45  | 5.17 | 0.43 | 0.86 |  |                                 |
| PSA Total           | ng/ml =   | 31.2   | 23.4  | 39.0 | 3.90 | 7.80 | Roche Elecsys Modular E170               |                                 |
|                     | ng/ml =   | 30.9   | 23.2  | 38.6 | 3.85 | 7.70 | Beckman Access standardised to Hybritech |                                 |
|                     | ng/ml =   | 33.2   | 24.9  | 41.5 | 4.15 | 8.30 | bioMerieux VIDAS TPSA                    |                                 |
|                     | ng/ml =   | 26.1   | 19.6  | 32.6 | 3.25 | 6.50 | Siemens Centaur XP/XPT/Classic           |                                 |
|                     | ng/ml =   | 27.2   | 20.4  | 34.0 | 3.40 | 6.80 | Abbott Architect                         |                                 |
|                     | ng/ml =   | 33.1   | 24.8  | 41.4 | 4.15 | 8.30 | Cobas E411                               |                                 |
|                     | ng/ml =   | 32.3   | 24.3  | 40.3 | 4.00 | 8.00 | Roche Cobas 6000/8000                    |                                 |
|                     | ng/ml =   | 29.9   | 22.4  | 37.4 | 3.75 | 7.50 | Ortho Vitros 3600/5600/ECi PSA II        |                                 |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte                     | unit    | Target | Range |       | 1SD   | 2SD                                       | methods                                |
|-----------------------------|---------|--------|-------|-------|-------|---|--|
|                             |         |        | low   | high  |       |   |  |
| Salicylate                  | mmol/l  | 0.84   | 0.67  | 1.01  | 0.08  | 0.17                                      | Enzymatic                              |
|                             | mg/dl   | 11.6   | 9.27  | 13.9  | 1.17  | 2.33                                      |  |
| Sodium                      | mmol/l  | 158    | 150   | 166   | 4.00  | 8.00                                      | Ortho Vitros Microslide Systems        |
|                             | mmol/l  | 156    | 148   | 164   | 4.00  | 8.00                                      | Enzymatic                              |
|                             | mmol/l  | 157    | 149   | 165   | 4.00  | 8.00                                      | Flame photometry                       |
|                             | mmol/l  | 158    | 150   | 166   | 4.00  | 8.00                                      | ISE method - direct                    |
|                             | mmol/l  | 159    | 151   | 167   | 4.00  | 8.00                                      | ISE method - indirect                  |
| Theophylline                | µmol/l  | 132    | 106   | 158   | 13.00 | 26.00                                     | Immunoturbidimetric                    |
|                             | µg/ml   | 23.8   | 19.1  | 28.5  | 2.35  | 4.70                                      |  |
| Thyroid Stimulating Hormone | µU/ml = | 0.96   | 0.77  | 1.15  | 0.10  | 0.19                                      | Abbott Architect                       |
|                             | µU/ml = | 1.08   | 0.87  | 1.30  | 0.11  | 0.22                                      | Beckman Access hyperTSH 3rd Generation |
|                             | µU/ml = | 1.15   | 0.92  | 1.38  | 0.11  | 0.23                                      | bioMerieux VIDAS TSH                   |
|                             | µU/ml = | 1.09   | 0.87  | 1.31  | 0.11  | 0.22                                      | Vitros ECi                             |
|                             | µU/ml = | 1.27   | 1.01  | 1.53  | 0.13  | 0.26                                      | Roche Elecsys                          |
|                             | µU/ml = | 1.24   | 0.99  | 1.49  | 0.13  | 0.25                                      | Roche Modular E170                     |
|                             | µU/ml = | 1.28   | 1.03  | 1.53  | 0.13  | 0.25                                      | Roche Cobas E411                       |
|                             | µU/ml = | 1.25   | 1.00  | 1.50  | 0.13  | 0.25                                      | Roche Cobas 6000/8000                  |
|                             | µU/ml = | 1.13   | 0.90  | 1.36  | 0.11  | 0.23                                      | Beckman Dxl800 Hyper TSH               |
| µU/ml =                     | 1.07    | 0.86   | 1.28  | 0.11  | 0.21  | Siemens Centaur XP/XPT/Classic TSH3-Ultra |  |
| TIBC                        | µmol/l  | 45.1   | 35.7  | 54.5  | 4.70  | 9.40                                      | Removal of excess free iron            |
|                             | µg/dl   | 252    | 200   | 304   | 26.00 | 52.00                                     |  |
|                             | µmol/l  | 47.9   | 37.9  | 57.9  | 5.00  | 10.00                                     | FE+UIBC(saturation with iron)          |
|                             | µg/dl   | 268    | 212   | 324   | 28.00 | 56.00                                     |  |
|                             | µmol/l  | 46.6   | 36.8  | 56.4  | 4.90  | 9.80                                      | Direct Colorimetric                    |
| µg/dl                       | 260     | 206    | 314   | 27.00 | 54.00 |   |  |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte    | unit     | Target | Range |      | 1SD   | 2SD   | methods                        |
|------------|----------|--------|-------|------|-------|-------|--------------------------------|
|            |          |        | low   | high |       |       |                                |
| TIBC       | µmol/l   | 41.3   | 32.7  | 49.9 | 4.30  | 8.60  | Calculated from Transferrin    |
|            | µg/dl    | 231    | 183   | 279  | 24.00 | 48.00 |                                |
|            | µmol/l   | 49.8   | 39.3  | 60.3 | 5.25  | 10.50 | Randox Direct                  |
|            | µg/dl    | 278    | 220   | 336  | 29.00 | 58.00 |                                |
| Tobramycin | µmol/l   | 14.0   | 11.2  | 16.8 | 1.40  | 2.80  | Immunoturbidimetric            |
|            | µg/ml    | 6.55   | 5.24  | 7.86 | 0.66  | 1.31  |                                |
| Total T3   | nmol/l   | 3.05   | 2.29  | 3.81 | 0.38  | 0.76  | Abbott Architect               |
|            | ng/ml    | 1.99   | 1.49  | 2.49 | 0.25  | 0.50  |                                |
|            | ng/dl    | 199    | 149   | 249  | 25.00 | 50.00 | Abbott Architect               |
|            | nmol/l   | 4.06   | 3.04  | 5.08 | 0.51  | 1.02  | Siemens Centaur XP/XPT/Classic |
|            | ng/ml    | 2.64   | 1.98  | 3.30 | 0.33  | 0.66  |                                |
|            | ng/dl    | 264    | 198   | 330  | 33.00 | 66.00 | Siemens Centaur XP/XPT/Classic |
|            | nmol/l   | 3.67   | 2.75  | 4.59 | 0.46  | 0.92  | BioMerieux Vidas               |
|            | ng/ml    | 2.39   | 1.79  | 2.99 | 0.30  | 0.60  |                                |
|            | ng/dl    | 239    | 179   | 299  | 30.00 | 60.00 | BioMerieux Vidas               |
|            | nmol/l   | 5.78   | 4.34  | 7.22 | 0.72  | 1.44  | Vitros ECi                     |
|            | ng/ml    | 3.76   | 2.83  | 4.69 | 0.47  | 0.93  |                                |
|            | ng/dl    | 376    | 283   | 469  | 46.50 | 93.00 | Vitros ECi                     |
|            | nmol/l   | 3.96   | 2.97  | 4.95 | 0.50  | 0.99  | Roche Cobas E411               |
|            | ng/ml    | 2.58   | 1.93  | 3.23 | 0.33  | 0.65  |                                |
|            | ng/dl    | 258    | 193   | 323  | 32.50 | 65.00 | Roche Cobas E411               |
|            | Total T4 | nmol/l | 216   | 162  | 270   | 27.00 | 54.00                          |
| µg/dl      |          | 16.8   | 12.6  | 21.0 | 2.10  | 4.20  |                                |
| ng/ml      |          | 168    | 126   | 210  | 21.00 | 42.00 | Abbott Architect               |

## MEAN OF ALL INSTRUMENTS

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte       | unit   | Target | Range |      | 1SD   | 2SD   | methods                              |
|---------------|--------|--------|-------|------|-------|-------|--------------------------------------|
|               |        |        | low   | high |       |       |                                      |
| Total T4      | nmol/l | 211    | 158   | 264  | 26.50 | 53.00 | Siemens Centaur XP/XPT/Classic       |
|               | µg/dl  | 16.5   | 12.3  | 20.7 | 2.10  | 4.20  |                                      |
|               | ng/ml  | 165    | 123   | 207  | 21.00 | 42.00 | Siemens Centaur XP/XPT/Classic       |
|               | nmol/l | 208    | 156   | 260  | 26.00 | 52.00 | BioMerieux Vidas                     |
|               | µg/dl  | 16.2   | 12.2  | 20.2 | 2.00  | 4.00  |                                      |
|               | ng/ml  | 162    | 122   | 202  | 20.00 | 40.00 | BioMerieux Vidas                     |
|               | nmol/l | 237    | 178   | 296  | 29.50 | 59.00 | Siemens Immulite 1000                |
|               | µg/dl  | 18.5   | 13.9  | 23.1 | 2.30  | 4.60  |                                      |
|               | ng/ml  | 185    | 139   | 231  | 23.00 | 46.00 | Siemens Immulite 1000                |
|               | nmol/l | 220    | 165   | 275  | 27.50 | 55.00 | Siemens Immulite 2000/2500           |
|               | µg/dl  | 17.2   | 12.9  | 21.5 | 2.15  | 4.30  |                                      |
|               | ng/ml  | 172    | 129   | 215  | 21.50 | 43.00 | Siemens Immulite 2000/2500           |
|               | nmol/l | 190    | 142   | 238  | 24.00 | 48.00 | Roche Cobas E411                     |
|               | µg/dl  | 14.8   | 11.1  | 18.5 | 1.85  | 3.70  |                                      |
|               | ng/ml  | 148    | 111   | 185  | 18.50 | 37.00 | Roche Cobas E411                     |
| Transferrin   | nmol/l | 195    | 146   | 244  | 24.50 | 49.00 | Roche Cobas 6000/8000                |
|               | µg/dl  | 15.2   | 11.4  | 19.0 | 1.90  | 3.80  |                                      |
|               | ng/ml  | 152    | 114   | 190  | 19.00 | 38.00 | Roche Cobas 6000/8000                |
| Triglycerides | 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 |                                      |

## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods                                   |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| Triglycerides     | mmol/l | 2.99   | 2.51  | 3.47 | 0.24  | 0.48  | L/G Kinase EP. no correction              |
|                   | mg/dl  | 265    | 222   | 308  | 21.50 | 43.00 |   |
|                   | mmol/l | 2.89   | 2.43  | 3.35 | 0.23  | 0.46  | Lipase/Glycerol Dehydrogenase             |
|                   | mg/dl  | 256    | 215   | 297  | 20.50 | 41.00 |   |
| UIBC              | mmol/l | 3.24   | 2.72  | 3.76 | 0.26  | 0.52  | Ortho Vitros Microslide Systems           |
|                   | mg/dl  | 287    | 241   | 333  | 23.00 | 46.00 |   |
| Urea              | µmol/l | 10.9   | 8.93  | 12.9 | 0.99  | 1.97  | Direct Colorimetric                       |
|                   | µg/dl  | 60.9   | 49.9  | 71.9 | 5.50  | 11.00 |   |
| Urea              | mmol/l | 18.0   | 15.3  | 20.7 | 1.35  | 2.70  | Ortho Vitros Microslide Systems           |
|                   | mg/dl  | 108    | 92.0  | 124  | 8.00  | 16.00 |   |
|                   | 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 | 19.3   | 16.4  | 22.2 | 1.45  | 2.90  | Urease kinetic                            |
|                   | mg/dl  | 116    | 98.6  | 133  | 8.70  | 17.40 |   |
|                   | mmol/l | 18.4   | 15.6  | 21.2 | 1.40  | 2.80  | Urease hypochlorite                       |
|                   | mg/dl  | 111    | 93.8  | 128  | 8.60  | 17.20 |   |
|                   | mmol/l | 19.3   | 16.4  | 22.2 | 1.45  | 2.90  | BUN                                       |
|                   | mg/dl  | 54.2   | 46.1  | 62.3 | 4.05  | 8.10  |   |
| Uric Acid (Urate) | mmol/l | 0.52   | 0.45  | 0.59 | 0.03  | 0.07  | Ortho Vitros Microslide Systems           |
|                   | mg/dl  | 8.74   | 7.61  | 9.87 | 0.57  | 1.13  |   |
|                   | mmol/l | 0.55   | 0.48  | 0.62 | 0.04  | 0.07  | Uricase catalase 340nm                    |
|                   | mg/dl  | 9.21   | 8.01  | 10.4 | 0.60  | 1.20  |   |
| Uric Acid (Urate) | mmol/l | 0.55   | 0.48  | 0.63 | 0.04  | 0.07  | Uricase peroxidase with ascorbate oxidase |
|                   | mg/dl  | 9.29   | 8.08  | 10.5 | 0.61  | 1.21  |   |



## MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|------|------|-------|-------|---|
| Uric Acid (Urate) | mmol/l | 0.55   | 0.47 | 0.62 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 9.16   | 7.96 | 10.4 | 0.60  | 1.20  |   |
|                   | mmol/l | 0.55   | 0.47 | 0.62 | 0.04  | 0.07  | Spectrophotometric at 280-290                     |
|                   | mg/dl  | 9.16   | 7.96 | 10.4 | 0.60  | 1.20  |   |
|                   | mmol/l | 0.55   | 0.48 | 0.62 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.19   | 8.00 | 10.4 | 0.60  | 1.19  |   |
| Vitamin B12       | pmol/l | 223    | 178  | 268  | 22.50 | 45.00 | Roche Cobas E411                                  |
|                   | pg/ml  | 302    | 241  | 363  | 30.50 | 61.00 |   |
| Zinc              | µmol/l | 33.5   | 26.8 | 40.2 | 3.35  | 6.70  | Colorimetric with deproteinisation                |
|                   | µg/dl  | 219    | 175  | 263  | 22.00 | 44.00 |   |

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte                   | unit | Target | Range |      | 1SD  | 2SD  | methods                                |
|---------------------------|------|--------|-------|------|------|------|--|
|                           |      |        | low   | high |      |      |  |
| Albumin (electrophoresis) |      | 61.1   | 55.1  | 67.1 | 3.00 | 6.00 | % of total Protein (Beckman Capillary) |
| alpha-1-globulin          |      | 7.9    | 6.0   | 9.8  | 0.95 | 1.90 | % of total Protein (Beckman Capillary) |
| alpha-2-globulin          |      | 5.5    | 4.2   | 6.8  | 0.66 | 1.32 | % of total Protein (Beckman Capillary) |
| beta-globulin             |      | 13.3   | 10.1  | 16.5 | 1.60 | 3.20 | % of total Protein (Beckman Capillary) |
| gamma-globulin            |      | 12.2   | 9.3   | 15.1 | 1.47 | 2.93 | % of total Protein (Beckman Capillary) |

## MINDRAY BS-200/300/400

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                           |
|----------------------|--------|--------|-------|------|-------|-------|-----------------------------------|
|                      |        |        | low   | high |       |       |                                   |
| Albumin              | g/l    | 29.4   | 25.0  | 33.8 | 2.20  | 4.40  | Bromocresol Green                 |
|                      | g/dl   | 2.94   | 2.50  | 3.38 | 0.22  | 0.44  |                                   |
| Alkaline Phosphatase | U/l    | 449    | 381   | 517  | 34.00 | 68.00 | Diethanolamine buffer DEA 37°C    |
|                      | U/l    | 350    | 297   | 403  | 26.50 | 53.00 | Diethanolamine buffer DEA 30°C    |
|                      | U/l    | 287    | 243   | 331  | 22.00 | 44.00 | Diethanolamine buffer DEA 25°C    |
|                      | U/l    | 331    | 282   | 380  | 24.50 | 49.00 | AMP optimised to IFCC 37°C        |
|                      | U/l    | 258    | 220   | 296  | 19.00 | 38.00 | AMP optimised to IFCC 30°C        |
|                      | U/l    | 212    | 180   | 244  | 16.00 | 32.00 | AMP optimised to IFCC 25°C        |
| ALT (GPT)            | U/l    | 138    | 111   | 165  | 13.50 | 27.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 102    | 82    | 122  | 10.00 | 20.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 78     | 62    | 94   | 8.00  | 16.00 | Tris buffer without P5P 25°C      |
| Amylase Total        | U/l    | 279    | 237   | 321  | 21.00 | 42.00 | pNP Maltotrioxide substrates 37°C |
| AST (GOT)            | U/l    | 152    | 121   | 183  | 15.50 | 31.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 103    | 82    | 124  | 10.50 | 21.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 72     | 58    | 86   | 7.00  | 14.00 | Tris buffer without P5P 25°C      |
| Bilirubin Direct     | µmol/l | 31.7   | 25.0  | 38.4 | 3.35  | 6.70  | Oxidation to Biliverdin/Vanadate  |
|                      | mg/dl  | 1.85   | 1.46  | 2.24 | 0.20  | 0.39  |                                   |
| 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  |                                   |
|                      | µmol/l | 81.5   | 64.3  | 98.7 | 8.60  | 17.20 | Oxidation to Biliverdin/Vanadate  |
|                      | mg/dl  | 4.77   | 3.76  | 5.78 | 0.51  | 1.01  |                                   |

## MINDRAY BS-200/300/400

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| Calcium           | mmol/l | 3.17   | 2.85  | 3.49 | 0.16  | 0.32  | Cresolphthalein complexone                          |
|                   | mg/dl  | 12.7   | 11.4  | 14.0 | 0.65  | 1.30  |   |
|                   | mmol/l | 3.08   | 2.77  | 3.39 | 0.16  | 0.31  | Arsenazo III  |
|                   | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60  | 1.20  |   |
| Cholesterol       | mmol/l | 7.52   | 6.54  | 8.50 | 0.49  | 0.98  | Cholesterol Oxidase                                 |
|                   | mg/dl  | 290    | 252   | 328  | 19.00 | 38.00 |   |
| CK Total          | U/l    | 545    | 447   | 643  | 49.00 | 98.00 | CK-NAC (IFCC) 37°C                                  |
|                   | U/l    | 341    | 280   | 402  | 30.50 | 61.00 | CK-NAC (IFCC) 30°C                                  |
|                   | U/l    | 232    | 190   | 274  | 21.00 | 42.00 | CK-NAC (IFCC) 25°C                                  |
| Creatinine        | µmol/l | 358    | 286   | 430  | 36.00 | 72.00 | Alkaline picrate no deproteinization                |
|                   | mg/dl  | 4.05   | 3.23  | 4.87 | 0.41  | 0.82  |   |
|                   | µmol/l | 378    | 302   | 454  | 38.00 | 76.00 | Enzymatic UV method                                 |
|                   | mg/dl  | 4.27   | 3.41  | 5.13 | 0.43  | 0.86  |   |
| gamma-GT          | U/l    | 162    | 138   | 186  | 12.00 | 24.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                   | U/l    | 128    | 109   | 147  | 9.50  | 19.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                   | U/l    | 100    | 85    | 115  | 7.50  | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                   | U/l    | 172    | 146   | 198  | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                   | U/l    | 136    | 115   | 157  | 10.50 | 21.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                   | U/l    | 106    | 90    | 122  | 8.00  | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose           | mmol/l | 15.6   | 13.3  | 17.9 | 1.15  | 2.30  | Hexokinase  |
|                   | mg/dl  | 281    | 240   | 322  | 20.50 | 41.00 |   |
|                   | 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 | 2.73   | 2.32  | 3.14 | 0.21  | 0.41  | Direct HDL PPD                                      |
|                   | mg/dl  | 105    | 89.6  | 120  | 7.70  | 15.40 |   |

## MINDRAY BS-200/300/400

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD    | methods                      |
|---------------------|--------|--------|-------|------|-------|--------|------------------------------|
|                     |        |        | low   | high |       |        |                              |
| Iron                | µmol/l | 35.9   | 29.4  | 42.4 | 3.25  | 6.50   | Colorimetric without ppt.    |
|                     | µg/dl  | 201    | 164   | 238  | 18.50 | 37.00  |                              |
| LD (LDH)            | U/l    | 721    | 613   | 829  | 54.00 | 108.00 | P->L German methods 37°C     |
|                     | U/l    | 521    | 443   | 599  | 39.00 | 78.00  | P->L German methods 30°C     |
|                     | U/l    | 366    | 311   | 421  | 27.50 | 55.00  | P->L German methods 25°C     |
|                     | U/l    | 356    | 302   | 410  | 27.00 | 54.00  | L->P IFCC 37°C               |
|                     | U/l    | 257    | 218   | 296  | 19.50 | 39.00  | L->P IFCC 30°C               |
|                     | U/l    | 180    | 153   | 207  | 13.50 | 27.00  | L->P IFCC 25°C               |
| Magnesium           | mmol/l | 1.57   | 1.39  | 1.75 | 0.09  | 0.18   | Xylidyl Blue                 |
|                     | mg/dl  | 3.82   | 3.38  | 4.26 | 0.22  | 0.44   |                              |
| Phosphate Inorganic | mmol/l | 2.18   | 1.85  | 2.51 | 0.17  | 0.33   | Phosphomolybdate enzymatic   |
|                     | mg/dl  | 6.76   | 5.74  | 7.78 | 0.51  | 1.02   |                              |
|                     | mmol/l | 2.10   | 1.79  | 2.41 | 0.16  | 0.31   | Phosphomolybdate UV          |
|                     | mg/dl  | 6.51   | 5.55  | 7.47 | 0.48  | 0.96   |                              |
| Protein Total       | g/l    | 46.2   | 37.0  | 55.4 | 4.60  | 9.20   | Biuret reaction end point    |
|                     | g/dl   | 4.62   | 3.70  | 5.54 | 0.46  | 0.92   |                              |
| Triglycerides       | mmol/l | 2.84   | 2.38  | 3.30 | 0.23  | 0.46   | Lipase/GPO-PAP no correction |
|                     | mg/dl  | 251    | 211   | 291  | 20.00 | 40.00  |                              |
| Urea                | mmol/l | 19.2   | 16.3  | 22.1 | 1.45  | 2.90   | Urease end point             |
|                     | mg/dl  | 115    | 98.0  | 132  | 8.50  | 17.00  |                              |
|                     | mmol/l | 18.8   | 16.0  | 21.6 | 1.40  | 2.80   | Urease kinetic               |
|                     | mg/dl  | 113    | 96.2  | 130  | 8.40  | 16.80  |                              |
|                     | mmol/l | 18.5   | 15.7  | 21.3 | 1.40  | 2.80   | Urease hypochlorite          |
|                     | mg/dl  | 111    | 94.4  | 128  | 8.30  | 16.60  |                              |
|                     | 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   |                              |

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

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD  | 2SD  | methods   |
|-------------------|--------|--------|-------|------|------|------|---|
|                   |        |        | low   | high |      |      |   |
| Uric Acid (Urate) | mmol/l | 0.56   | 0.49  | 0.63 | 0.04 | 0.07 | Uricase peroxidase with ascorbate oxidase         |
|                   | mg/dl  | 9.37   | 8.15  | 10.6 | 0.61 | 1.22 |   |
|                   | mmol/l | 0.54   | 0.47  | 0.62 | 0.04 | 0.07 | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 9.14   | 7.95  | 10.3 | 0.60 | 1.19 |   |
|                   | mmol/l | 0.54   | 0.47  | 0.61 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.14   | 7.96  | 10.3 | 0.59 | 1.18 |   |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                           |
|----------------------|--------|--------|-------|------|-------|-------|-----------------------------------|
|                      |        |        | low   | high |       |       |                                   |
| Albumin              | g/l    | 29.5   | 25.1  | 33.9 | 2.20  | 4.40  | Bromocresol Green                 |
|                      | g/dl   | 2.95   | 2.51  | 3.39 | 0.22  | 0.44  |                                   |
|                      | g/l    | 26.3   | 22.3  | 30.3 | 2.00  | 4.00  | Bromocresol Purple                |
|                      | g/dl   | 2.63   | 2.23  | 3.03 | 0.20  | 0.40  |                                   |
|                      | g/l    | 26.6   | 22.6  | 30.6 | 2.00  | 4.00  | Turbidimetric Assays              |
|                      | g/dl   | 2.66   | 2.26  | 3.06 | 0.20  | 0.40  |                                   |
| Alkaline Phosphatase | U/l    | 251    | 214   | 288  | 18.50 | 37.00 | Roche Integra AMP buffer 37°C     |
|                      | U/l    | 196    | 167   | 225  | 14.50 | 29.00 | Roche Integra AMP buffer 30°C     |
|                      | U/l    | 160    | 137   | 183  | 11.50 | 23.00 | Roche Integra AMP buffer 25°C     |
| ALT (GPT)            | U/l    | 128    | 102   | 154  | 13.00 | 26.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 95     | 75    | 115  | 10.00 | 20.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 72     | 57    | 87   | 7.50  | 15.00 | Tris buffer without P5P 25°C      |
| Amylase Pancreatic   | U/l    | 238    | 202   | 274  | 18.00 | 36.00 | Roche liquid stable pNPG7 37°C    |
| Amylase Total        | U/l    | 259    | 220   | 298  | 19.50 | 39.00 | Roche Integra 2-chloro-pNPG7 37°C |
|                      | U/l    | 260    | 221   | 299  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C    |
| AST (GOT)            | U/l    | 147    | 117   | 177  | 15.00 | 30.00 | Tris buffer without P5P 37°C      |
|                      | U/l    | 99     | 79    | 119  | 10.00 | 20.00 | Tris buffer without P5P 30°C      |
|                      | U/l    | 70     | 56    | 84   | 7.00  | 14.00 | Tris buffer without P5P 25°C      |
| Bicarbonate          | mmol/l | 16.2   | 12.8  | 19.6 | 1.70  | 3.40  | Colorimetric                      |
|                      | mmol/l | 16.5   | 13.1  | 19.9 | 1.70  | 3.40  | Enzymatic                         |
| Bile Acids           | µmol/l | 42.7   | 34.2  | 51.2 | 4.25  | 8.50  | Enzymatic Colorimetric            |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte          | unit   | Target | Range |      | 1SD    | 2SD     | methods                              |
|------------------|--------|--------|-------|------|--------|---------|--------------------------------------|
|                  |        |        | low   | high |        |         |                                      |
| Bilirubin Direct | µmol/l | 28.3   | 22.4  | 34.2 | 2.95   | 5.90    | Dichlorophenyl Diazonium (DPD)       |
|                  | mg/dl  | 1.66   | 1.31  | 2.01 | 0.18   | 0.35    |                                      |
|                  | µmol/l | 28.3   | 22.3  | 34.3 | 3.00   | 6.00    | Diazo with Sulphanilic Acid          |
|                  | mg/dl  | 1.66   | 1.30  | 2.02 | 0.18   | 0.36    |                                      |
| Bilirubin Total  | µmol/l | 72.4   | 57.2  | 87.6 | 7.60   | 15.20   | Diazo with Sulphanilic Acid          |
|                  | mg/dl  | 4.24   | 3.35  | 5.13 | 0.45   | 0.89    |                                      |
|                  | µmol/l | 72.6   | 57.4  | 87.8 | 7.60   | 15.20   | Dichlorophenyl Diazonium (DPD)       |
|                  | mg/dl  | 4.25   | 3.36  | 5.14 | 0.45   | 0.89    |                                      |
| Calcium          | µmol/l | 73.0   | 57.7  | 88.3 | 7.65   | 15.30   | Diazonium ion                        |
|                  | mg/dl  | 4.27   | 3.38  | 5.16 | 0.45   | 0.89    |                                      |
|                  | mmol/l | 3.14   | 2.82  | 3.46 | 0.16   | 0.32    | Cresolphthalein complexone           |
|                  | mg/dl  | 12.6   | 11.3  | 13.9 | 0.65   | 1.30    |                                      |
| Chloride         | mmol/l | 110    | 101   | 119  | 4.50   | 9.00    | ISE indirect                         |
|                  | mg/dl  | 12.5   | 11.3  | 13.7 | 0.60   | 1.20    | NM-BAPTA                             |
| Cholesterol      | mmol/l | 7.49   | 6.52  | 8.46 | 0.49   | 0.97    | Cholesterol Oxidase                  |
|                  | mg/dl  | 289    | 252   | 326  | 18.50  | 37.00   |                                      |
| Cholinesterase   | U/l    | 5100   | 4080  | 6120 | 510.00 | 1020.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total         | U/l    | 539    | 442   | 636  | 48.50  | 97.00   | CK-NAC substrate start (DGKC) 37°C   |
|                  | U/l    | 337    | 277   | 397  | 30.00  | 60.00   | CK-NAC substrate start (DGKC) 30°C   |
|                  | U/l    | 229    | 188   | 270  | 20.50  | 41.00   | CK-NAC substrate start (DGKC) 25°C   |
|                  | U/l    | 526    | 431   | 621  | 47.50  | 95.00   | CK-NAC (IFCC) 37°C                   |
|                  | U/l    | 329    | 270   | 388  | 29.50  | 59.00   | CK-NAC (IFCC) 30°C                   |
|                  | U/l    | 224    | 183   | 265  | 20.50  | 41.00   | CK-NAC (IFCC) 25°C                   |
| Creatinine       | µmol/l | 383    | 306   | 460  | 38.50  | 77.00   | Alkaline picrate no deproteinization |
|                  | mg/dl  | 4.33   | 3.46  | 5.20 | 0.44   | 0.87    |                                      |



## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |       | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|-------|-------|-------|---|---|
|                     |        |        | low   | high  |       |   |   |
| Creatinine          | μmol/l | 394    | 315   | 473   | 39.50 | 79.00                                       | Enzymatic UV method                                 |
|                     | mg/dl  | 4.45   | 3.56  | 5.34  | 0.45  | 0.89  |   |
|                     | μmol/l | 391    | 313   | 469   | 39.00 | 78.00                                       | Roche Creatinine Plus                               |
|                     | mg/dl  | 4.42   | 3.54  | 5.30  | 0.44  | 0.88  |   |
|                     | μmol/l | 385    | 308   | 462   | 38.50 | 77.00                                       | Jaffe rate blanked                                  |
|                     | mg/dl  | 4.35   | 3.48  | 5.22  | 0.44  | 0.87  |   |
|                     | μmol/l | 376    | 300   | 452   | 38.00 | 76.00                                       | Jaffe rate blanked comp. (-26 μmol/l)               |
|                     | mg/dl  | 4.25   | 3.39  | 5.11  | 0.43  | 0.86  |   |
| μmol/l              | 371    | 297    | 445   | 37.00 | 74.00 | Jaffe rate blanked compensated (-18 μmol/l) |   |
| mg/dl               | 4.19   | 3.36   | 5.02  | 0.42  | 0.83  |   |   |
| D-3-Hydroxybutyrate | mmol/l | 1.16   | 0.98  | 1.34  | 0.09  | 0.18  | Tris buffer 100mmol pH 8.5                          |
| Free T4             | pmol/l | 77.9   | 58.4  | 97.4  | 9.75  | 19.50                                       | Roche Cobas 6000/8000                               |
|                     | ng/dl  | 6.08   | 4.56  | 7.60  | 0.76  | 1.52  |   |
|                     | pg/ml  | 60.8   | 45.6  | 76.0  | 7.60  | 15.20                                       | Roche Cobas 6000/8000                               |
| gamma-GT            | U/l    | 159    | 135   | 183   | 12.00 | 24.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                     | U/l    | 125    | 106   | 144   | 9.50  | 19.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                     | U/l    | 98     | 83    | 113   | 7.50  | 15.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                     | U/l    | 182    | 155   | 209   | 13.50 | 27.00                                       | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                     | U/l    | 143    | 122   | 164   | 10.50 | 21.00                                       | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                     | U/l    | 112    | 96    | 128   | 8.00  | 16.00                                       | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| GLDH                | U/l    | 27     | 21    | 33    | 3.00  | 6.00  | Triethanolamine buffer 50 mmol 37°C                 |
|                     | U/l    | 21     | 16    | 26    | 2.50  | 5.00  | Triethanolamine buffer 50 mmol 30°C                 |
|                     | U/l    | 17     | 13    | 21    | 2.00  | 4.00  | Triethanolamine buffer 50 mmol 25°C                 |
| Glucose             | mmol/l | 15.6   | 13.3  | 17.9  | 1.15  | 2.30  | Glucose dehydrogenase                               |
|                     | mg/dl  | 281    | 240   | 322   | 20.50 | 41.00                                       |   |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD    | methods                                |                         |
|-------------------|--------|--------|-------|------|-------|--------|--|-------------------------|
|                   |        |        | low   | high |       |        |  |                         |
| Glucose           | mmol/l | 15.6   | 13.3  | 17.9 | 1.15  | 2.30   | Hexokinase                             |                         |
|                   | mg/dl  | 281    | 240   | 322  | 20.50 | 41.00  |  |                         |
|                   | mmol/l | 15.4   | 13.1  | 17.7 | 1.15  | 2.30   | Glucose oxidase                        |                         |
|                   | mg/dl  | 278    | 236   | 320  | 21.00 | 42.00  |  |                         |
| HDL - Cholesterol | mmol/l | 2.71   | 2.31  | 3.11 | 0.20  | 0.40   | Direct HDL Immunoseparation            |                         |
|                   | mg/dl  | 105    | 89.2  | 121  | 7.90  | 15.80  |  |                         |
|                   | mmol/l | 3.14   | 2.67  | 3.61 | 0.24  | 0.47   | Direct HDL PEGME                       |                         |
|                   | mg/dl  | 121    | 103   | 139  | 9.00  | 18.00  |  |                         |
| Iron              | mmol/l | 3.34   | 2.84  | 3.84 | 0.25  | 0.50   | Direct HDL Roche 3rd generation        |                         |
|                   | mg/dl  | 129    | 110   | 148  | 9.50  | 19.00  |  |                         |
|                   | Iron   | µmol/l | 36.7  | 30.1 | 43.3  | 3.30   | 6.60                                   | Colorimetric with ppt.  |
|                   |        | µg/dl  | 205   | 168  | 242   | 18.50  | 37.00                                  |                         |
| µmol/l            |        | 36.8   | 30.2  | 43.4 | 3.30  | 6.60   | Colorimetric without ppt.              |                         |
| µg/dl             |        | 206    | 169   | 243  | 18.50 | 37.00  |  |                         |
| Lactate           | mmol/l | 5.48   | 4.49  | 6.47 | 0.50  | 0.99   | Colorimetric Lactate Oxidase           |                         |
|                   | mg/dl  | 49.4   | 40.5  | 58.3 | 4.45  | 8.90   |  |                         |
| LD (LDH)          | U/l    | 688    | 585   | 791  | 51.50 | 103.00 | P->L German methods 37°C               |                         |
|                   | U/l    | 497    | 422   | 572  | 37.50 | 75.00  | P->L German methods 30°C               |                         |
|                   | U/l    | 349    | 297   | 401  | 26.00 | 52.00  | P->L German methods 25°C               |                         |
|                   | U/l    | 364    | 309   | 419  | 27.50 | 55.00  | L->P IFCC 37°C                         |                         |
|                   | U/l    | 263    | 223   | 303  | 20.00 | 40.00  | L->P IFCC 30°C                         |                         |
|                   | U/l    | 185    | 157   | 213  | 14.00 | 28.00  | L->P IFCC 25°C                         |                         |
|                   | Lipase | U/l    | 53    | 43   | 63    | 5.00   | 10.00                                  | Roche Colorimetric 37°C |
| U/l               |        | 53     | 43    | 63   | 5.00  | 10.00  | Roche Turbidimetric with colipase 37°C |                         |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte                     | unit    | Target | Range |      | 1SD   | 2SD   | methods                       |
|-----------------------------|---------|--------|-------|------|-------|-------|-------------------------------|
|                             |         |        | low   | high |       |       |                               |
| Lithium                     | mmol/l  | 2.03   | 1.79  | 2.27 | 0.12  | 0.24  | Spectrophotometric            |
|                             | mg/dl   | 1.41   | 1.24  | 1.58 | 0.09  | 0.17  |                               |
| Magnesium                   | mmol/l  | 1.72   | 1.52  | 1.92 | 0.10  | 0.20  | Xylidyl Blue                  |
|                             | mg/dl   | 4.18   | 3.69  | 4.67 | 0.25  | 0.49  |                               |
|                             | mmol/l  | 1.74   | 1.53  | 1.95 | 0.11  | 0.21  | Chlorphosphonazo III          |
|                             | mg/dl   | 4.23   | 3.72  | 4.74 | 0.26  | 0.51  |                               |
| Osmolality                  | mOsm/kg | 348    | 278   | 418  | 35.00 | 70.00 | Calculated                    |
| Phosphate Inorganic         | mmol/l  | 2.20   | 1.87  | 2.53 | 0.17  | 0.33  | Phosphomolybdate enzymatic    |
|                             | mg/dl   | 6.82   | 5.80  | 7.84 | 0.51  | 1.02  |                               |
|                             | mmol/l  | 2.21   | 1.88  | 2.54 | 0.17  | 0.33  | Phosphomolybdate UV           |
|                             | mg/dl   | 6.85   | 5.83  | 7.87 | 0.51  | 1.02  |                               |
| Potassium                   | mmol/l  | 6.31   | 5.80  | 6.82 | 0.26  | 0.51  | ISE method - indirect         |
| Protein Total               | g/l     | 44.3   | 35.4  | 53.2 | 4.45  | 8.90  | Biuret reaction CX4/5/7       |
|                             | g/dl    | 4.43   | 3.54  | 5.32 | 0.45  | 0.89  |                               |
|                             | g/l     | 44.2   | 35.3  | 53.1 | 4.45  | 8.90  | Biuret reaction end point     |
|                             | g/dl    | 4.42   | 3.53  | 5.31 | 0.45  | 0.89  |                               |
|                             | g/l     | 44.6   | 35.7  | 53.5 | 4.45  | 8.90  | Biuret reaction kinetic       |
|                             | g/dl    | 4.46   | 3.57  | 5.35 | 0.45  | 0.89  |                               |
| PSA Total                   | ng/ml = | 32.3   | 24.3  | 40.3 | 4.00  | 8.00  | Roche Cobas 6000/8000         |
| Sodium                      | mmol/l  | 160    | 152   | 168  | 4.00  | 8.00  | ISE method - indirect         |
| Thyroid Stimulating Hormone | µU/ml = | 1.25   | 1.00  | 1.50 | 0.13  | 0.25  | Roche Cobas 6000/8000         |
| TIBC                        | µmol/l  | 46.9   | 37.1  | 56.7 | 4.90  | 9.80  | FE+UIBC(saturation with iron) |
|                             | µg/dl   | 262    | 207   | 317  | 27.50 | 55.00 |                               |
|                             | µmol/l  | 45.6   | 36.0  | 55.2 | 4.80  | 9.60  | Direct Colorimetric           |
|                             | µg/dl   | 255    | 201   | 309  | 27.00 | 54.00 |                               |

## Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| TIBC              | µmol/l | 42.2   | 33.3  | 51.1 | 4.45  | 8.90  | Calculated from Transferrin                       |
|                   | µg/dl  | 236    | 186   | 286  | 25.00 | 50.00 |   |
| Total T3          | nmol/l | 3.95   | 2.96  | 4.94 | 0.50  | 0.99  | Roche Cobas 6000/8000                             |
|                   | ng/ml  | 2.57   | 1.93  | 3.21 | 0.32  | 0.64  |   |
|                   | ng/dl  | 257    | 193   | 321  | 32.00 | 64.00 | Roche Cobas 6000/8000                             |
| Total T4          | nmol/l | 195    | 146   | 244  | 24.50 | 49.00 | Roche Cobas 6000/8000                             |
|                   | µg/dl  | 15.2   | 11.4  | 19.0 | 1.90  | 3.80  |   |
|                   | ng/ml  | 152    | 114   | 190  | 19.00 | 38.00 | Roche Cobas 6000/8000                             |
| Triglycerides     | mmol/l | 2.92   | 2.46  | 3.38 | 0.23  | 0.46  | Lipase/GPO-PAP no correction                      |
|                   | mg/dl  | 258    | 218   | 298  | 20.00 | 40.00 |   |
|                   | mmol/l | 2.93   | 2.46  | 3.40 | 0.24  | 0.47  | L/G Kinase EP. no correction                      |
|                   | mg/dl  | 259    | 218   | 300  | 20.50 | 41.00 |   |
| Urea              | mmol/l | 19.4   | 16.5  | 22.3 | 1.45  | 2.90  | Urease end point                                  |
|                   | mg/dl  | 117    | 99.2  | 135  | 8.90  | 17.80 |   |
|                   | mmol/l | 19.3   | 16.4  | 22.2 | 1.45  | 2.90  | Urease kinetic                                    |
|                   | mg/dl  | 116    | 98.6  | 133  | 8.70  | 17.40 |   |
|                   | mmol/l | 19.3   | 16.4  | 22.2 | 1.45  | 2.90  | BUN   |
|                   | mg/dl  | 54.2   | 46.1  | 62.3 | 4.05  | 8.10  |   |
| Uric Acid (Urate) | mmol/l | 0.54   | 0.47  | 0.61 | 0.04  | 0.07  | Uricase peroxidase with ascorbate oxidase         |
|                   | mg/dl  | 9.04   | 7.86  | 10.2 | 0.59  | 1.18  |   |
|                   | mmol/l | 0.54   | 0.47  | 0.61 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 9.07   | 7.90  | 10.2 | 0.59  | 1.17  |   |
|                   | mmol/l | 0.54   | 0.47  | 0.60 | 0.03  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 8.99   | 7.83  | 10.2 | 0.58  | 1.16  |   |

## Roche Cobas C111®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                        |
|----------------------|--------|--------|-------|------|-------|-------|--------------------------------|
|                      |        |        | low   | high |       |       |                                |
| Albumin              | g/l    | 28.9   | 24.5  | 33.3 | 2.20  | 4.40  | Bromocresol Green              |
|                      | g/dl   | 2.89   | 2.45  | 3.33 | 0.22  | 0.44  |                                |
| Alkaline Phosphatase | U/l    | 257    | 218   | 296  | 19.50 | 39.00 | Roche Integra AMP buffer 37°C  |
|                      | U/l    | 200    | 170   | 230  | 15.00 | 30.00 | Roche Integra AMP buffer 30°C  |
|                      | U/l    | 164    | 139   | 189  | 12.50 | 25.00 | Roche Integra AMP buffer 25°C  |
| ALT (GPT)            | U/l    | 126    | 101   | 151  | 12.50 | 25.00 | Tris buffer without P5P 37°C   |
|                      | U/l    | 93     | 75    | 111  | 9.00  | 18.00 | Tris buffer without P5P 30°C   |
|                      | U/l    | 71     | 57    | 85   | 7.00  | 14.00 | Tris buffer without P5P 25°C   |
| Amylase Total        | U/l    | 268    | 228   | 308  | 20.00 | 40.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT)            | U/l    | 143    | 115   | 171  | 14.00 | 28.00 | Tris buffer without P5P 37°C   |
|                      | U/l    | 97     | 78    | 116  | 9.50  | 19.00 | Tris buffer without P5P 30°C   |
|                      | U/l    | 68     | 55    | 81   | 6.50  | 13.00 | Tris buffer without P5P 25°C   |
| Bilirubin Direct     | µmol/l | 29.5   | 23.3  | 35.7 | 3.10  | 6.20  | Dichlorophenyl Diazonium (DPD) |
|                      | mg/dl  | 1.73   | 1.36  | 2.10 | 0.19  | 0.37  |                                |
|                      | 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 | 30.0   | 23.7  | 36.3 | 3.15  | 6.30  | Roche JG factored              |
|                      | mg/dl  | 1.76   | 1.39  | 2.13 | 0.19  | 0.37  |                                |
| Bilirubin Total      | µmol/l | 75.6   | 59.7  | 91.5 | 7.95  | 15.90 | Diazo with Sulphanilic Acid    |
|                      | mg/dl  | 4.42   | 3.49  | 5.35 | 0.47  | 0.93  |                                |
|                      | µmol/l | 70.7   | 55.8  | 85.6 | 7.45  | 14.90 | Dichlorophenyl Diazonium (DPD) |
|                      | mg/dl  | 4.14   | 3.26  | 5.02 | 0.44  | 0.88  |                                |

## Roche Cobas C111®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte     | unit   | Target | Range |       | 1SD   | 2SD   | methods   |
|-------------|--------|--------|-------|-------|-------|---|---|
|             |        |        | low   | high  |       |   |   |
| Calcium     | mmol/l | 3.11   | 2.80  | 3.42  | 0.16  | 0.31  | Cresolphthalein complexone                          |
|             | mg/dl  | 12.5   | 11.2  | 13.8  | 0.65  | 1.30  |   |
|             | mmol/l | 3.08   | 2.77  | 3.39  | 0.16  | 0.31  | Arsenazo III  |
|             | mg/dl  | 12.3   | 11.1  | 13.5  | 0.60  | 1.20  |   |
|             | mmol/l | 3.12   | 2.81  | 3.43  | 0.16  | 0.31  | NM-BAPTA  |
|             | mg/dl  | 12.5   | 11.3  | 13.7  | 0.60  | 1.20  |   |
| Chloride    | mmol/l | 111    | 102   | 120   | 4.50  | 9.00  | ISE indirect  |
| Cholesterol | mmol/l | 7.59   | 6.60  | 8.58  | 0.50  | 0.99  | Cholesterol Oxidase                                 |
|             | mg/dl  | 293    | 255   | 331   | 19.00 | 38.00                                       |   |
| CK Total    | U/l    | 531    | 435   | 627   | 48.00 | 96.00                                       | CK-NAC (IFCC) 37°C                                  |
|             | U/l    | 332    | 272   | 392   | 30.00 | 60.00                                       | CK-NAC (IFCC) 30°C                                  |
|             | U/l    | 226    | 185   | 267   | 20.50 | 41.00                                       | CK-NAC (IFCC) 25°C                                  |
| Creatinine  | µmol/l | 355    | 284   | 426   | 35.50 | 71.00                                       | Alkaline picrate with deproteinization              |
|             | mg/dl  | 4.01   | 3.21  | 4.81  | 0.40  | 0.80  |   |
|             | µmol/l | 354    | 283   | 425   | 35.50 | 71.00                                       | Alkaline picrate no deproteinization                |
|             | mg/dl  | 4.00   | 3.20  | 4.80  | 0.40  | 0.80  |   |
|             | µmol/l | 378    | 302   | 454   | 38.00 | 76.00                                       | Roche Creatinine Plus                               |
|             | mg/dl  | 4.27   | 3.41  | 5.13  | 0.43  | 0.86  |   |
| µmol/l      | 358    | 287    | 429   | 35.50 | 71.00 | Jaffe rate blanked compensated (-18 µmol/l) |   |
| mg/dl       | 4.05   | 3.24   | 4.86  | 0.41  | 0.81  |   |   |
| gamma-GT    | U/l    | 183    | 155   | 211   | 14.00 | 28.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|             | U/l    | 144    | 122   | 166   | 11.00 | 22.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|             | U/l    | 113    | 96    | 130   | 8.50  | 17.00                                       | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|             | U/l    | 179    | 152   | 206   | 13.50 | 27.00                                       | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|             | U/l    | 141    | 120   | 162   | 10.50 | 21.00                                       | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|             | U/l    | 110    | 94    | 126   | 8.00  | 16.00                                       | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |

## Roche Cobas C111®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods                         |
|---------------------|--------|--------|-------|------|-------|-------|---------------------------------|
|                     |        |        | low   | high |       |       |                                 |
| Glucose             | mmol/l | 15.9   | 13.5  | 18.3 | 1.20  | 2.40  | Hexokinase                      |
|                     | mg/dl  | 287    | 243   | 331  | 22.00 | 44.00 |                                 |
|                     | mmol/l | 15.7   | 13.4  | 18.0 | 1.15  | 2.30  | Glucose oxidase                 |
|                     | mg/dl  | 283    | 241   | 325  | 21.00 | 42.00 |                                 |
| HDL - Cholesterol   | mmol/l | 3.30   | 2.81  | 3.79 | 0.25  | 0.49  | Direct HDL Roche 3rd generation |
|                     | mg/dl  | 127    | 108   | 146  | 9.50  | 19.00 |                                 |
| Iron                | µmol/l | 36.7   | 30.1  | 43.3 | 3.30  | 6.60  | Colorimetric without ppt.       |
|                     | µg/dl  | 205    | 168   | 242  | 18.50 | 37.00 |                                 |
| LD (LDH)            | U/l    | 377    | 320   | 434  | 28.50 | 57.00 | L->P IFCC 37°C                  |
|                     | U/l    | 272    | 231   | 313  | 20.50 | 41.00 | L->P IFCC 30°C                  |
|                     | U/l    | 191    | 162   | 220  | 14.50 | 29.00 | L->P IFCC 25°C                  |
| Lipase              | U/l    | 55     | 44    | 66   | 5.50  | 11.00 | Roche Colorimetric 37°C         |
| Magnesium           | mmol/l | 1.70   | 1.49  | 1.91 | 0.11  | 0.21  | Chlorphosphonazo III            |
|                     | mg/dl  | 4.13   | 3.62  | 4.64 | 0.26  | 0.51  |                                 |
| Phosphate Inorganic | mmol/l | 2.25   | 1.91  | 2.59 | 0.17  | 0.34  | Phosphomolybdate UV             |
|                     | mg/dl  | 6.98   | 5.92  | 8.04 | 0.53  | 1.06  |                                 |
| Potassium           | mmol/l | 6.07   | 5.58  | 6.56 | 0.25  | 0.49  | ISE method - indirect           |
| Protein Total       | g/l    | 44.4   | 35.5  | 53.3 | 4.45  | 8.90  | Biuret reaction end point       |
|                     | g/dl   | 4.44   | 3.55  | 5.33 | 0.45  | 0.89  |                                 |
| Sodium              | mmol/l | 154    | 146   | 162  | 4.00  | 8.00  | ISE method - indirect           |
| Triglycerides       | mmol/l | 2.88   | 2.42  | 3.34 | 0.23  | 0.46  | Lipase/GPO-PAP no correction    |
|                     | mg/dl  | 255    | 214   | 296  | 20.50 | 41.00 |                                 |
| Urea                | mmol/l | 19.2   | 16.4  | 22.0 | 1.40  | 2.80  | Urease end point                |
|                     | mg/dl  | 115    | 98.6  | 131  | 8.20  | 16.40 |                                 |

## Roche Cobas C111®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD  | 2SD   | methods   |
|-------------------|--------|--------|-------|------|------|-------|---|
|                   |        |        | low   | high |      |       |   |
| Urea              | mmol/l | 18.6   | 15.8  | 21.4 | 1.40 | 2.80  | Urease kinetic                                    |
|                   | mg/dl  | 112    | 95.0  | 129  | 8.50 | 17.00 |   |
|                   | mmol/l | 18.5   | 15.7  | 21.3 | 1.40 | 2.80  | Urease hypochlorite                               |
|                   | mg/dl  | 111    | 94.4  | 128  | 8.30 | 16.60 |   |
|                   | mmol/l | 18.6   | 15.8  | 21.4 | 1.40 | 2.80  | BUN   |
|                   | mg/dl  | 52.2   | 44.4  | 60.0 | 3.90 | 7.80  |   |
| Uric Acid (Urate) | mmol/l | 0.54   | 0.47  | 0.62 | 0.04 | 0.07  | Uricase peroxidase with ascorbate oxidase         |
|                   | mg/dl  | 9.14   | 7.95  | 10.3 | 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 | 0.55   | 0.48  | 0.62 | 0.04 | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.27   | 8.08  | 10.5 | 0.60 | 1.19  |   |



## Roche Cobas C311®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                          |
|----------------------|--------|--------|-------|------|-------|-------|----------------------------------|
|                      |        |        | low   | high |       |       |                                  |
| Albumin              | g/l    | 29.5   | 25.1  | 33.9 | 2.20  | 4.40  | Bromocresol Green                |
|                      | g/dl   | 2.95   | 2.51  | 3.39 | 0.22  | 0.44  |                                  |
|                      | g/l    | 26.3   | 22.3  | 30.3 | 2.00  | 4.00  | Bromocresol Purple               |
|                      | g/dl   | 2.63   | 2.23  | 3.03 | 0.20  | 0.40  |                                  |
| Alkaline Phosphatase | U/l    | 250    | 212   | 288  | 19.00 | 38.00 | Roche Integra AMP buffer 37°C    |
|                      | U/l    | 195    | 165   | 225  | 15.00 | 30.00 | Roche Integra AMP buffer 30°C    |
|                      | U/l    | 160    | 135   | 185  | 12.50 | 25.00 | Roche Integra AMP buffer 25°C    |
| ALT (GPT)            | U/l    | 128    | 103   | 153  | 12.50 | 25.00 | Tris buffer without P5P 37°C     |
|                      | U/l    | 95     | 76    | 114  | 9.50  | 19.00 | Tris buffer without P5P 30°C     |
|                      | U/l    | 72     | 58    | 86   | 7.00  | 14.00 | Tris buffer without P5P 25°C     |
| Amylase Pancreatic   | U/l    | 244    | 207   | 281  | 18.50 | 37.00 | Roche liquid stable pNPG7 37°C   |
| Amylase Total        | U/l    | 263    | 224   | 302  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C   |
| AST (GOT)            | U/l    | 146    | 117   | 175  | 14.50 | 29.00 | Tris buffer without P5P 37°C     |
|                      | U/l    | 99     | 79    | 119  | 10.00 | 20.00 | Tris buffer without P5P 30°C     |
|                      | U/l    | 69     | 56    | 82   | 6.50  | 13.00 | Tris buffer without P5P 25°C     |
| Bicarbonate          | mmol/l | 16.1   | 12.8  | 19.4 | 1.65  | 3.30  | Enzymatic                        |
| Bilirubin Direct     | µmol/l | 27.6   | 21.8  | 33.4 | 2.90  | 5.80  | Dichlorophenyl Diazonium (DPD)   |
|                      | mg/dl  | 1.61   | 1.28  | 1.94 | 0.17  | 0.33  |                                  |
|                      | µmol/l | 27.4   | 21.7  | 33.1 | 2.85  | 5.70  | Diazo with Sulphanilic Acid      |
|                      | mg/dl  | 1.60   | 1.27  | 1.93 | 0.17  | 0.33  |                                  |
|                      | µmol/l | 27.8   | 21.9  | 33.7 | 2.95  | 5.90  | Diazo with Dichloroaniline (DCA) |
|                      | mg/dl  | 1.63   | 1.28  | 1.98 | 0.18  | 0.35  |                                  |

## Roche Cobas C311®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte         | unit   | Target | Range |      | 1SD   | 2SD          | methods                              |
|-----------------|--------|--------|-------|------|-------|--------------|--------------------------------------|
|                 |        |        | low   | high |       |              |                                      |
| Bilirubin Total | µmol/l | 72.8   | 57.5  | 88.1 | 7.65  | 15.30        | Diazo with Sulphanilic Acid          |
|                 | mg/dl  | 4.26   | 3.36  | 5.16 | 0.45  | 0.90         |                                      |
|                 | µmol/l | 72.9   | 57.6  | 88.2 | 7.65  | 15.30        | Dichlorophenyl Diazonium (DPD)       |
|                 | mg/dl  | 4.26   | 3.37  | 5.15 | 0.45  | 0.89         |                                      |
| Calcium         | µmol/l | 73.4   | 57.9  | 88.9 | 7.75  | 15.50        | Diazonium ion                        |
|                 | mg/dl  | 4.29   | 3.39  | 5.19 | 0.45  | 0.90         |                                      |
|                 | mmol/l | 3.15   | 2.83  | 3.47 | 0.16  | 0.32         | Cresolphthalein complexone           |
|                 |        | mg/dl  | 12.6  | 11.3 | 13.9  | 0.65         |                                      |
| mmol/l          | 3.00   | 2.70   | 3.30  | 0.15 | 0.30  | Arsenazo III |                                      |
|                 | mg/dl  | 12.0   | 10.8  | 13.2 | 0.60  |              | 1.20                                 |
| mmol/l          | 3.16   | 2.84   | 3.48  | 0.16 | 0.32  | NM-BAPTA     |                                      |
|                 | mg/dl  | 12.7   | 11.4  | 14.0 | 0.65  |              | 1.30                                 |
| Chloride        | mmol/l | 110    | 101   | 119  | 4.50  | 9.00         | ISE indirect                         |
| Cholesterol     | mmol/l | 7.54   | 6.56  | 8.52 | 0.49  | 0.98         | Cholesterol Oxidase                  |
|                 | mg/dl  | 291    | 253   | 329  | 19.00 | 38.00        |                                      |
| CK Total        | U/l    | 530    | 435   | 625  | 47.50 | 95.00        | CK-NAC (IFCC) 37°C                   |
|                 | U/l    | 332    | 272   | 392  | 30.00 | 60.00        | CK-NAC (IFCC) 30°C                   |
|                 | U/l    | 225    | 185   | 265  | 20.00 | 40.00        | CK-NAC (IFCC) 25°C                   |
| Creatinine      | µmol/l | 368    | 294   | 442  | 37.00 | 74.00        | Alkaline picrate no deproteinization |
|                 | mg/dl  | 4.16   | 3.32  | 5.00 | 0.42  | 0.84         |                                      |
|                 | µmol/l | 398    | 318   | 478  | 40.00 | 80.00        | Enzymatic UV method                  |
|                 | mg/dl  | 4.50   | 3.59  | 5.41 | 0.46  | 0.91         |                                      |
|                 | µmol/l | 399    | 319   | 479  | 40.00 | 80.00        | Roche Creatinine Plus                |
|                 | mg/dl  | 4.51   | 3.60  | 5.42 | 0.46  | 0.91         |                                      |

## Roche Cobas C311®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD    | methods   |
|-------------------|--------|--------|-------|------|-------|--------|---|
|                   |        |        | low   | high |       |        |   |
| Creatinine        | µmol/l | 380    | 304   | 456  | 38.00 | 76.00  | Jaffe rate blanked                                  |
|                   | mg/dl  | 4.29   | 3.44  | 5.14 | 0.43  | 0.85   |   |
|                   | µmol/l | 386    | 309   | 463  | 38.50 | 77.00  | Jaffe rate blanked comp. (-26 µmol/l)               |
|                   | mg/dl  | 4.36   | 3.49  | 5.23 | 0.44  | 0.87   |   |
| gamma-GT          | U/l    | 162    | 138   | 186  | 12.00 | 24.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                   | U/l    | 128    | 109   | 147  | 9.50  | 19.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                   | U/l    | 100    | 85    | 115  | 7.50  | 15.00  | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                   | U/l    | 185    | 157   | 213  | 14.00 | 28.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                   | U/l    | 146    | 124   | 168  | 11.00 | 22.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                   | U/l    | 114    | 97    | 131  | 8.50  | 17.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose           | mmol/l | 15.8   | 13.4  | 18.2 | 1.20  | 2.40   | Hexokinase  |
|                   | mg/dl  | 285    | 241   | 329  | 22.00 | 44.00  |   |
|                   | mmol/l | 16.0   | 13.6  | 18.4 | 1.20  | 2.40   | Glucose oxidase                                     |
|                   | mg/dl  | 288    | 245   | 331  | 21.50 | 43.00  |   |
| HDL - Cholesterol | mmol/l | 3.22   | 2.74  | 3.70 | 0.24  | 0.48   | Direct HDL Roche 3rd generation                     |
|                   | mg/dl  | 124    | 106   | 142  | 9.00  | 18.00  |   |
| Iron              | µmol/l | 36.2   | 29.7  | 42.7 | 3.25  | 6.50   | Colorimetric without ppt.                           |
|                   | µg/dl  | 202    | 166   | 238  | 18.00 | 36.00  |   |
| Lactate           | mmol/l | 5.54   | 4.54  | 6.54 | 0.50  | 1.00   | Colorimetric Lactate Oxidase                        |
|                   | mg/dl  | 49.9   | 40.9  | 58.9 | 4.50  | 9.00   |   |
| LD (LDH)          | U/l    | 678    | 576   | 780  | 51.00 | 102.00 | P->L German methods 37°C                            |
|                   | U/l    | 490    | 416   | 564  | 37.00 | 74.00  | P->L German methods 30°C                            |
|                   | U/l    | 344    | 292   | 396  | 26.00 | 52.00  | P->L German methods 25°C                            |
|                   | U/l    | 365    | 310   | 420  | 27.50 | 55.00  | L->P IFCC 37°C                                      |
|                   | U/l    | 264    | 224   | 304  | 20.00 | 40.00  | L->P IFCC 30°C                                      |
|                   | U/l    | 185    | 157   | 213  | 14.00 | 28.00  | L->P IFCC 25°C                                      |

## Roche Cobas C311®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

### Range

| Analyte             | unit   | Target | low  | high | 1SD   | 2SD   | methods                                   |
|---------------------|--------|--------|------|------|-------|-------|---|
| Lipase              | U/l    | 54     | 44   | 64   | 5.00  | 10.00 | Roche Colorimetric 37°C                   |
| Magnesium           | mmol/l | 1.74   | 1.53 | 1.95 | 0.11  | 0.21  | Xylidyl Blue                              |
|                     | mg/dl  | 4.23   | 3.72 | 4.74 | 0.26  | 0.51  |   |
|                     | mmol/l | 1.75   | 1.54 | 1.96 | 0.11  | 0.21  | Chlorphosphonazo III                      |
|                     | mg/dl  | 4.25   | 3.74 | 4.76 | 0.26  | 0.51  |   |
| Phosphate Inorganic | mmol/l | 2.24   | 1.90 | 2.58 | 0.17  | 0.34  | Phosphomolybdate UV                       |
|                     | mg/dl  | 6.94   | 5.89 | 7.99 | 0.53  | 1.05  |   |
| Potassium           | mmol/l | 6.32   | 5.82 | 6.82 | 0.25  | 0.50  | ISE method - indirect                     |
| Protein Total       | g/l    | 44.4   | 35.5 | 53.3 | 4.45  | 8.90  | Biuret reaction end point                 |
|                     | g/dl   | 4.44   | 3.55 | 5.33 | 0.45  | 0.89  |   |
| Sodium              | mmol/l | 161    | 153  | 169  | 4.00  | 8.00  | ISE method - indirect                     |
| TIBC                | µmol/l | 46.8   | 37.0 | 56.6 | 4.90  | 9.80  | FE+UIBC(saturation with iron)             |
|                     | µg/dl  | 262    | 207  | 317  | 27.50 | 55.00 |   |
| Triglycerides       | mmol/l | 2.93   | 2.46 | 3.40 | 0.24  | 0.47  | Lipase/GPO-PAP no correction              |
|                     | mg/dl  | 259    | 218  | 300  | 20.50 | 41.00 |   |
|                     | mmol/l | 3.04   | 2.55 | 3.53 | 0.25  | 0.49  | L/G Kinase EP. no correction              |
|                     | mg/dl  | 269    | 226  | 312  | 21.50 | 43.00 |   |
| 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  |   |
| Uric Acid (Urate)   | mmol/l | 0.55   | 0.48 | 0.62 | 0.04  | 0.07  | Uricase peroxidase with ascorbate oxidase |
|                     | mg/dl  | 9.22   | 8.01 | 10.4 | 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  |   |

**Roche Cobas C311®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD  | 2SD  | methods   |
|-------------------|--------|--------|-------|------|------|------|---|
|                   |        |        | low   | high |      |      |   |
| Uric Acid (Urate) | mmol/l | 0.55   | 0.48  | 0.63 | 0.04 | 0.07 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.29   | 8.08  | 10.5 | 0.61 | 1.21 |   |

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                          |
|----------------------|--------|--------|-------|------|-------|-------|----------------------------------|
|                      |        |        | low   | high |       |       |                                  |
| Albumin              | g/l    | 29.5   | 25.1  | 33.9 | 2.20  | 4.40  | Bromocresol Green                |
|                      | g/dl   | 2.95   | 2.51  | 3.39 | 0.22  | 0.44  |                                  |
| Alkaline Phosphatase | U/l    | 232    | 197   | 267  | 17.50 | 35.00 | Roche Integra AMP buffer 37°C    |
|                      | U/l    | 181    | 153   | 209  | 14.00 | 28.00 | Roche Integra AMP buffer 30°C    |
|                      | U/l    | 148    | 126   | 170  | 11.00 | 22.00 | Roche Integra AMP buffer 25°C    |
| ALT (GPT)            | U/l    | 129    | 103   | 155  | 13.00 | 26.00 | Tris buffer without P5P 37°C     |
|                      | U/l    | 95     | 76    | 114  | 9.50  | 19.00 | Tris buffer without P5P 30°C     |
|                      | U/l    | 73     | 58    | 88   | 7.50  | 15.00 | Tris buffer without P5P 25°C     |
| Amylase Pancreatic   | U/l    | 236    | 201   | 271  | 17.50 | 35.00 | Roche liquid stable pNPG7 37°C   |
| Amylase Total        | U/l    | 261    | 222   | 300  | 19.50 | 39.00 | Roche liquid stable pNPG7 37°C   |
| AST (GOT)            | U/l    | 147    | 117   | 177  | 15.00 | 30.00 | Tris buffer without P5P 37°C     |
|                      | U/l    | 99     | 79    | 119  | 10.00 | 20.00 | Tris buffer without P5P 30°C     |
|                      | U/l    | 70     | 56    | 84   | 7.00  | 14.00 | Tris buffer without P5P 25°C     |
| Bicarbonate          | mmol/l | 17.4   | 13.8  | 21.0 | 1.80  | 3.60  | Enzymatic                        |
| Bile Acids           | µmol/l | 39.7   | 31.8  | 47.6 | 3.95  | 7.90  | Enzymatic Colorimetric           |
| Bilirubin Direct     | µmol/l | 29.2   | 23.1  | 35.3 | 3.05  | 6.10  | Dichlorophenyl Diazonium (DPD)   |
|                      | mg/dl  | 1.71   | 1.35  | 2.07 | 0.18  | 0.36  |                                  |
|                      | µmol/l | 25.3   | 20.0  | 30.6 | 2.65  | 5.30  | Oxidation to Biliverdin/Vanadate |
|                      | mg/dl  | 1.48   | 1.17  | 1.79 | 0.16  | 0.31  |                                  |
| Bilirubin Total      | µmol/l | 74.3   | 58.7  | 89.9 | 7.80  | 15.60 | Diazo with Sulphanilic Acid      |
|                      | mg/dl  | 4.35   | 3.43  | 5.27 | 0.46  | 0.92  |                                  |

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte         | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|-----------------|--------|--------|-------|------|-------|-------|---|
|                 |        |        | low   | high |       |       |   |
| Bilirubin Total | µmol/l | 71.9   | 56.8  | 87.0 | 7.55  | 15.10 | Dichlorophenyl Diazonium (DPD)                      |
|                 | mg/dl  | 4.21   | 3.32  | 5.10 | 0.45  | 0.89  |   |
|                 | µmol/l | 71.5   | 56.5  | 86.5 | 7.50  | 15.00 | Diazonium ion                                       |
|                 | mg/dl  | 4.18   | 3.31  | 5.05 | 0.44  | 0.87  |   |
| Calcium         | mmol/l | 3.07   | 2.77  | 3.37 | 0.15  | 0.30  | Cresolphthalein complexone                          |
|                 | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60  | 1.20  |   |
|                 | 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  |   |
| Chloride        | mmol/l | 111    | 102   | 120  | 4.50  | 9.00  | ISE indirect  |
| Cholesterol     | mmol/l | 7.41   | 6.45  | 8.37 | 0.48  | 0.96  | Cholesterol Oxidase                                 |
|                 | mg/dl  | 286    | 249   | 323  | 18.50 | 37.00 |   |
| CK Total        | U/l    | 511    | 419   | 603  | 46.00 | 92.00 | CK-NAC (IFCC) 37°C                                  |
|                 | U/l    | 320    | 262   | 378  | 29.00 | 58.00 | CK-NAC (IFCC) 30°C                                  |
|                 | U/l    | 217    | 178   | 256  | 19.50 | 39.00 | CK-NAC (IFCC) 25°C                                  |
| Creatinine      | µmol/l | 392    | 313   | 471  | 39.50 | 79.00 | Roche Creatinine Plus                               |
|                 | mg/dl  | 4.43   | 3.54  | 5.32 | 0.45  | 0.89  |   |
|                 | µmol/l | 382    | 306   | 458  | 38.00 | 76.00 | Jaffe rate blanked comp. (-26 µmol/l)               |
|                 | mg/dl  | 4.32   | 3.46  | 5.18 | 0.43  | 0.86  |   |
| gamma-GT        | U/l    | 155    | 131   | 179  | 12.00 | 24.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C       |
|                 | U/l    | 122    | 103   | 141  | 9.50  | 19.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C       |
|                 | U/l    | 96     | 81    | 111  | 7.50  | 15.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C       |
|                 | U/l    | 178    | 152   | 204  | 13.00 | 26.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                 | U/l    | 140    | 120   | 160  | 10.00 | 20.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
|                 | U/l    | 110    | 94    | 126  | 8.00  | 16.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
|                 |        |        |       |      |       |       |   |
| Glucose         | mmol/l | 15.6   | 13.2  | 18.0 | 1.20  | 2.40  | Hexokinase  |
|                 | mg/dl  | 281    | 238   | 324  | 21.50 | 43.00 |   |

## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods                         |
|---------------------|--------|--------|-------|------|-------|-------|---------------------------------|
|                     |        |        | low   | high |       |       |                                 |
| Glucose             | mmol/l | 15.5   | 13.2  | 17.8 | 1.15  | 2.30  | Glucose oxidase                 |
|                     | mg/dl  | 279    | 238   | 320  | 20.50 | 41.00 |                                 |
| HDL - Cholesterol   | mmol/l | 3.24   | 2.75  | 3.73 | 0.25  | 0.49  | Direct HDL Roche 3rd generation |
|                     | mg/dl  | 125    | 106   | 144  | 9.50  | 19.00 |                                 |
| Iron                | µmol/l | 35.7   | 29.2  | 42.2 | 3.25  | 6.50  | Colorimetric without ppt.       |
|                     | µg/dl  | 200    | 163   | 237  | 18.50 | 37.00 |                                 |
| Lactate             | mmol/l | 5.43   | 4.45  | 6.41 | 0.49  | 0.98  | Colorimetric Lactate Oxidase    |
|                     | mg/dl  | 48.9   | 40.1  | 57.7 | 4.40  | 8.80  |                                 |
| LD (LDH)            | U/l    | 365    | 310   | 420  | 27.50 | 55.00 | L->P IFCC 37°C                  |
|                     | U/l    | 264    | 224   | 304  | 20.00 | 40.00 | L->P IFCC 30°C                  |
|                     | U/l    | 185    | 157   | 213  | 14.00 | 28.00 | L->P IFCC 25°C                  |
| Lipase              | U/l    | 54     | 43    | 65   | 5.50  | 11.00 | Roche Colorimetric 37°C         |
| Lithium             | mmol/l | 2.05   | 1.80  | 2.30 | 0.13  | 0.25  | Spectrophotometric              |
|                     | mg/dl  | 1.42   | 1.25  | 1.59 | 0.09  | 0.17  |                                 |
| Magnesium           | mmol/l | 1.71   | 1.50  | 1.92 | 0.11  | 0.21  | Xylidyl Blue                    |
|                     | mg/dl  | 4.16   | 3.65  | 4.67 | 0.26  | 0.51  |                                 |
| Phosphate Inorganic | mmol/l | 2.18   | 1.85  | 2.51 | 0.17  | 0.33  | Phosphomolybdate UV             |
|                     | mg/dl  | 6.76   | 5.74  | 7.78 | 0.51  | 1.02  |                                 |
| Potassium           | mmol/l | 6.31   | 5.81  | 6.81 | 0.25  | 0.50  | ISE method - indirect           |
| Protein Total       | g/l    | 43.7   | 35.0  | 52.4 | 4.35  | 8.70  | Biuret reaction end point       |
|                     | g/dl   | 4.37   | 3.50  | 5.24 | 0.44  | 0.87  |                                 |
| Sodium              | mmol/l | 161    | 153   | 169  | 4.00  | 8.00  | ISE method - indirect           |
| TIBC                | µmol/l | 48.1   | 38.0  | 58.2 | 5.05  | 10.10 | FE+UIBC(saturation with iron)   |
|                     | µg/dl  | 269    | 212   | 326  | 28.50 | 57.00 |                                 |



## Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| TIBC              | μmol/l | 40.5   | 32.0  | 49.0 | 4.25  | 8.50  | Calculated from Transferrin                       |
|                   | μg/dl  | 226    | 179   | 273  | 23.50 | 47.00 |   |
| 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 | 2.93   | 2.47  | 3.39 | 0.23  | 0.46  | L/G Kinase EP. no correction                      |
|                   | mg/dl  | 259    | 219   | 299  | 20.00 | 40.00 |   |
| UIBC              | μmol/l | 12.1   | 9.94  | 14.3 | 1.08  | 2.16  | Direct Colorimetric                               |
|                   | μg/dl  | 67.6   | 55.6  | 79.6 | 6.00  | 12.00 |   |
| 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 |   |
|                   | 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  |   |
| Uric Acid (Urate) | mmol/l | 0.54   | 0.47  | 0.61 | 0.04  | 0.07  | Uricase peroxidase with ascorbate oxidase         |
|                   | mg/dl  | 9.09   | 7.90  | 10.3 | 0.60  | 1.19  |   |
|                   | mmol/l | 0.54   | 0.47  | 0.60 | 0.03  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 8.99   | 7.83  | 10.2 | 0.58  | 1.16  |   |
|                   | mmol/l | 0.53   | 0.46  | 0.60 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 8.97   | 7.80  | 10.1 | 0.59  | 1.17  |   |

## RX SERIES®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                             |
|----------------------|--------|--------|-------|------|-------|-------|-------------------------------------|
|                      |        |        | low   | high |       |       |                                     |
| 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    | 527    | 448   | 606  | 39.50 | 79.00 | Diethanolamine buffer DEA 37°C      |
|                      | U/l    | 332    | 282   | 382  | 25.00 | 50.00 | AMP optimised to IFCC 37°C          |
| ALT (GPT)            | U/l    | 138    | 110   | 166  | 14.00 | 28.00 | Tris buffer without P5P 37°C        |
| Amylase Pancreatic   | U/l    | 282    | 240   | 324  | 21.00 | 42.00 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total        | U/l    | 295    | 251   | 339  | 22.00 | 44.00 | Randox Liquid Ethylidene pNPG7 37°C |
| AST (GOT)            | U/l    | 156    | 125   | 187  | 15.50 | 31.00 | Tris buffer without P5P 37°C        |
| Bicarbonate          | mmol/l | 18.0   | 14.3  | 21.7 | 1.85  | 3.70  | Enzymatic                           |
| Bile Acids           | µmol/l | 41.6   | 33.3  | 49.9 | 4.15  | 8.30  | 5th Generation Colorimetric         |
| Bilirubin Direct     | µmol/l | 27.0   | 21.3  | 32.7 | 2.85  | 5.70  | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 1.58   | 1.25  | 1.91 | 0.17  | 0.33  |                                     |
|                      | µmol/l | 29.7   | 23.5  | 35.9 | 3.10  | 6.20  | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 1.74   | 1.37  | 2.11 | 0.19  | 0.37  |                                     |
| Bilirubin Total      | µmol/l | 83.0   | 65.6  | 100  | 8.70  | 17.40 | Diazo with Sulphanilic Acid         |
|                      | mg/dl  | 4.86   | 3.84  | 5.88 | 0.51  | 1.02  |                                     |
|                      | µmol/l | 86.2   | 68.1  | 104  | 9.05  | 18.10 | Oxidation to Biliverdin/Vanadate    |
|                      | mg/dl  | 5.04   | 3.98  | 6.10 | 0.53  | 1.06  |                                     |
| Calcium              | mmol/l | 3.14   | 2.83  | 3.45 | 0.16  | 0.31  | Arsenazo III                        |
|                      | mg/dl  | 12.6   | 11.3  | 13.9 | 0.65  | 1.30  |                                     |
| Chloride             | mmol/l | 111    | 102   | 120  | 4.50  | 9.00  | ISE direct                          |

## RX SERIES®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD    | methods   |
|---------------------|--------|--------|-------|------|-------|--------|---|
|                     |        |        | low   | high |       |        |   |
| Cholesterol         | mmol/l | 7.89   | 6.86  | 8.92 | 0.52  | 1.03   | Cholesterol Oxidase                                 |
|                     | mg/dl  | 305    | 265   | 345  | 20.00 | 40.00  |   |
| CK Total            | U/l    | 526    | 431   | 621  | 47.50 | 95.00  | CK-NAC substrate start (DGKC) 37°C                  |
|                     | U/l    | 591    | 485   | 697  | 53.00 | 106.00 | CK-NAC (IFCC) 37°C                                  |
| Creatinine          | µmol/l | 323    | 258   | 388  | 32.50 | 65.00  | Alkaline picrate no deproteinization                |
|                     | mg/dl  | 3.65   | 2.92  | 4.38 | 0.37  | 0.73   |   |
|                     | µmol/l | 387    | 310   | 464  | 38.50 | 77.00  | Enzymatic UV method                                 |
|                     | mg/dl  | 4.37   | 3.50  | 5.24 | 0.44  | 0.87   |   |
| gamma-GT            | U/l    | 194    | 165   | 223  | 14.50 | 29.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose             | mmol/l | 16.0   | 13.6  | 18.4 | 1.20  | 2.40   | Hexokinase  |
|                     | mg/dl  | 288    | 245   | 331  | 21.50 | 43.00  |   |
|                     | mmol/l | 16.1   | 13.7  | 18.5 | 1.20  | 2.40   | Glucose oxidase                                     |
|                     | mg/dl  | 290    | 247   | 333  | 21.50 | 43.00  |   |
| Iron                | µmol/l | 37.5   | 30.8  | 44.2 | 3.35  | 6.70   | Colorimetric without ppt.                           |
|                     | µg/dl  | 210    | 172   | 248  | 19.00 | 38.00  |   |
| Lactate             | mmol/l | 5.52   | 4.53  | 6.51 | 0.50  | 0.99   | Colorimetric Lactate Oxidase                        |
|                     | mg/dl  | 49.7   | 40.8  | 58.6 | 4.45  | 8.90   |   |
| LD (LDH)            | U/l    | 710    | 604   | 816  | 53.00 | 106.00 | P->L German methods 37°C                            |
|                     | U/l    | 379    | 322   | 436  | 28.50 | 57.00  | L->P IFCC 37°C                                      |
| Lipase              | U/l    | 87     | 70    | 104  | 8.50  | 17.00  | Randox Colorimetric 37°C                            |
| Lithium             | mmol/l | 2.01   | 1.77  | 2.25 | 0.12  | 0.24   | Colorimetric  |
|                     | mg/dl  | 1.40   | 1.23  | 1.57 | 0.09  | 0.17   |   |
| Magnesium           | mmol/l | 1.71   | 1.50  | 1.92 | 0.11  | 0.21   | Xylidyl Blue  |
|                     | mg/dl  | 4.16   | 3.65  | 4.67 | 0.26  | 0.51   |   |
| Phosphate Inorganic | mmol/l | 2.23   | 1.90  | 2.56 | 0.17  | 0.33   | Phosphomolybdate UV                                 |
|                     | mg/dl  | 6.91   | 5.89  | 7.93 | 0.51  | 1.02   |   |

## RX SERIES®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| Potassium         | mmol/l | 6.08   | 5.59  | 6.57 | 0.25  | 0.49  | ISE method - direct                               |
|                   | mmol/l | 6.29   | 5.79  | 6.79 | 0.25  | 0.50  | Enzymatic   |
| Protein Total     | g/l    | 45.4   | 36.3  | 54.5 | 4.55  | 9.10  | Biuret reaction end point                         |
|                   | g/dl   | 4.54   | 3.63  | 5.45 | 0.46  | 0.91  |   |
| Sodium            | mmol/l | 158    | 150   | 166  | 4.00  | 8.00  | ISE method - direct                               |
|                   | mmol/l | 156    | 148   | 165  | 4.15  | 8.30  | Enzymatic   |
| TIBC              | µmol/l | 49.8   | 39.3  | 60.3 | 5.25  | 10.50 | Direct Colorimetric                               |
|                   | µg/dl  | 278    | 220   | 336  | 29.00 | 58.00 |   |
| Triglycerides     | mmol/l | 2.86   | 2.40  | 3.32 | 0.23  | 0.46  | Lipase/GPO-PAP no correction                      |
|                   | mg/dl  | 253    | 212   | 294  | 20.50 | 41.00 |   |
| Urea              | mmol/l | 19.2   | 16.4  | 22.0 | 1.40  | 2.80  | Urease kinetic                                    |
|                   | mg/dl  | 115    | 98.6  | 131  | 8.20  | 16.40 |   |
|                   | mmol/l | 19.2   | 16.3  | 22.1 | 1.45  | 2.90  | BUN   |
|                   | mg/dl  | 53.9   | 45.8  | 62.0 | 4.05  | 8.10  |   |
| Uric Acid (Urate) | mmol/l | 0.57   | 0.49  | 0.64 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase           |
|                   | mg/dl  | 9.54   | 8.30  | 10.8 | 0.62  | 1.24  |   |
|                   | mmol/l | 0.55   | 0.48  | 0.62 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                   | mg/dl  | 9.19   | 8.00  | 10.4 | 0.60  | 1.19  |   |

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods                              |
|----------------------|--------|--------|-------|------|-------|-------|--------------------------------------|
|                      |        |        | low   | high |       |       |                                      |
| Albumin              | g/l    | 27.9   | 23.7  | 32.1 | 2.10  | 4.20  | Bromocresol Green                    |
|                      | g/dl   | 2.79   | 2.37  | 3.21 | 0.21  | 0.42  |                                      |
|                      | g/l    | 26.3   | 22.3  | 30.3 | 2.00  | 4.00  | Bromocresol Purple                   |
|                      | g/dl   | 2.63   | 2.23  | 3.03 | 0.20  | 0.40  |                                      |
| Alkaline Phosphatase | U/l    | 288    | 245   | 331  | 21.50 | 43.00 | AMP optimised to IFCC 37°C           |
|                      | U/l    | 276    | 235   | 317  | 20.50 | 41.00 | AMP non-optimised 37°C               |
| ALT (GPT)            | U/l    | 140    | 112   | 168  | 14.00 | 28.00 | Tris buffer without P5P 37°C         |
| Amylase Pancreatic   | U/l    | 237    | 202   | 272  | 17.50 | 35.00 | Immuno-inhibition EPS substrate 37°C |
| Amylase Total        | U/l    | 277    | 235   | 319  | 21.00 | 42.00 | Siemens - blocked pNPG7 37°C         |
| AST (GOT)            | U/l    | 155    | 124   | 186  | 15.50 | 31.00 | Tris buffer without P5P 37°C         |
| Bicarbonate          | mmol/l | 19.1   | 15.1  | 23.1 | 2.00  | 4.00  | Enzymatic                            |
| Bile Acids           | µmol/l | 43.4   | 34.7  | 52.1 | 4.35  | 8.70  | Enzymatic Colorimetric               |
| Bilirubin Direct     | µmol/l | 27.6   | 21.8  | 33.4 | 2.90  | 5.80  | Oxidation to Biliverdin/Vanadate     |
|                      | mg/dl  | 1.61   | 1.28  | 1.94 | 0.17  | 0.33  |                                      |
| Bilirubin Total      | µmol/l | 83.7   | 66.1  | 101  | 8.80  | 17.60 | Oxidation to Biliverdin/Vanadate     |
|                      | mg/dl  | 4.90   | 3.87  | 5.93 | 0.52  | 1.03  |                                      |
| Calcium              | mmol/l | 3.16   | 2.85  | 3.47 | 0.16  | 0.31  | Cresolphthalein complexone           |
|                      | mg/dl  | 12.7   | 11.4  | 14.0 | 0.65  | 1.30  |                                      |
|                      | mmol/l | 3.08   | 2.77  | 3.39 | 0.16  | 0.31  | Arsenazo III                         |
|                      | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60  | 1.20  |                                      |
| Chloride             | mmol/l | 115    | 106   | 124  | 4.50  | 9.00  | ISE indirect                         |

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

### Range

| Analyte           | unit   | Target | low  | high | 1SD   | 2SD    | methods   |
|-------------------|--------|--------|------|------|-------|--------|---|
| Cholesterol       | mmol/l | 7.71   | 6.71 | 8.71 | 0.50  | 1.00   | Cholesterol Oxidase                                 |
|                   | mg/dl  | 298    | 259  | 337  | 19.50 | 39.00  |   |
| CK Total          | U/l    | 528    | 433  | 623  | 47.50 | 95.00  | CK-NAC (IFCC) 37°C                                  |
| Creatinine        | µmol/l | 388    | 310  | 466  | 39.00 | 78.00  | Enzymatic UV method                                 |
|                   | mg/dl  | 4.38   | 3.50 | 5.26 | 0.44  | 0.88   |   |
|                   | µmol/l | 365    | 292  | 438  | 36.50 | 73.00  | Jaffe rate blanked comp. (-26 µmol/l)               |
|                   | mg/dl  | 4.12   | 3.30 | 4.94 | 0.41  | 0.82   |   |
| gamma-GT          | U/l    | 178    | 152  | 204  | 13.00 | 26.00  | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose           | mmol/l | 15.4   | 13.1 | 17.7 | 1.15  | 2.30   | Hexokinase  |
|                   | mg/dl  | 278    | 236  | 320  | 21.00 | 42.00  |   |
|                   | mmol/l | 15.5   | 13.2 | 17.8 | 1.15  | 2.30   | Glucose oxidase                                     |
|                   | mg/dl  | 279    | 238  | 320  | 20.50 | 41.00  |   |
| HDL - Cholesterol | mmol/l | 2.37   | 2.02 | 2.72 | 0.18  | 0.35   | Direct Clearance Method                             |
|                   | mg/dl  | 91.5   | 78.0 | 105  | 6.75  | 13.50  |   |
| Iron              | µmol/l | 37.5   | 30.7 | 44.3 | 3.40  | 6.80   | Colorimetric without ppt.                           |
|                   | µg/dl  | 210    | 172  | 248  | 19.00 | 38.00  |   |
| Lactate           | mmol/l | 5.44   | 4.46 | 6.42 | 0.49  | 0.98   | Colorimetric Lactate Oxidase                        |
|                   | mg/dl  | 49.0   | 40.2 | 57.8 | 4.40  | 8.80   |   |
| LD (LDH)          | U/l    | 702    | 597  | 807  | 52.50 | 105.00 | P->L German methods 37°C                            |
|                   | U/l    | 363    | 309  | 417  | 27.00 | 54.00  | L->P IFCC 37°C                                      |
| Lipase            | U/l    | 79     | 63   | 95   | 8.00  | 16.00  | Other Colorimetric 37°C                             |
| Lithium           | mmol/l | 1.91   | 1.68 | 2.14 | 0.12  | 0.23   | Spectrophotometric                                  |
|                   | mg/dl  | 1.33   | 1.17 | 1.49 | 0.08  | 0.16   |   |
| Magnesium         | mmol/l | 1.71   | 1.51 | 1.91 | 0.10  | 0.20   | Xylidyl Blue  |
|                   | mg/dl  | 4.16   | 3.67 | 4.65 | 0.25  | 0.49   |   |

## SIEMENS ADVIA 1200/1650/1800/2400®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods                                 |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| Phosphate Inorganic | mmol/l | 2.23   | 1.90  | 2.56 | 0.17  | 0.33  | Phosphomolybdate UV                     |
|                     | mg/dl  | 6.91   | 5.89  | 7.93 | 0.51  | 1.02  |   |
| Potassium           | mmol/l | 6.25   | 5.75  | 6.75 | 0.25  | 0.50  | ISE method - indirect                   |
| 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  |   |
| Sodium              | mmol/l | 160    | 152   | 168  | 4.00  | 8.00  | ISE method - indirect                   |
| TIBC                | μmol/l | 49.4   | 39.1  | 59.7 | 5.15  | 10.30 | Direct Colorimetric                     |
|                     | μg/dl  | 276    | 219   | 333  | 28.50 | 57.00 |   |
| Triglycerides       | mmol/l | 3.01   | 2.53  | 3.49 | 0.24  | 0.48  | Lipase/GPO-PAP no correction            |
|                     | mg/dl  | 266    | 224   | 308  | 21.00 | 42.00 |   |
|                     | mmol/l | 2.96   | 2.49  | 3.43 | 0.24  | 0.47  | L/G Kinase EP. no correction            |
|                     | mg/dl  | 262    | 220   | 304  | 21.00 | 42.00 |   |
| Urea                | 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  |   |
| Uric Acid (Urate)   | mmol/l | 0.55   | 0.48  | 0.62 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase |
|                     | mg/dl  | 9.26   | 8.06  | 10.5 | 0.60  | 1.20  |   |

## SIEMENS DIMENSION EXL®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods  |
|----------------------|--------|--------|-------|------|-------|-------|--|
|                      |        |        | low   | high |       |       |  |
| Albumin              | g/l    | 26.7   | 22.7  | 30.7 | 2.00  | 4.00  | Bromocresol Purple                             |
|                      | g/dl   | 2.67   | 2.27  | 3.07 | 0.20  | 0.40  |  |
| Alkaline Phosphatase | U/l    | 288    | 245   | 331  | 21.50 | 43.00 | Siemens Dimension AMP buffer 37°C              |
|                      | U/l    | 285    | 242   | 328  | 21.50 | 43.00 | AMP optimised to IFCC 37°C                     |
| ALT (GPT)            | U/l    | 143    | 115   | 171  | 14.00 | 28.00 | Tris buffer with P5P 37°C                      |
|                      | U/l    | 145    | 116   | 174  | 14.50 | 29.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total        | U/l    | 328    | 279   | 377  | 24.50 | 49.00 | Siemens 2-chloro-pNPG3 37°C                    |
| AST (GOT)            | U/l    | 177    | 142   | 212  | 17.50 | 35.00 | Tris buffer with P5P 37°C                      |
|                      | U/l    | 185    | 148   | 222  | 18.50 | 37.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate          | mmol/l | 18.1   | 14.3  | 21.9 | 1.90  | 3.80  | Enzymatic                                      |
| Bilirubin Direct     | µmol/l | 16.0   | 12.7  | 19.3 | 1.65  | 3.30  | Diazo with Sulphanilic Acid                    |
|                      | mg/dl  | 0.936  | 0.743 | 1.13 | 0.10  | 0.19  |  |
| Bilirubin Total      | µmol/l | 77.6   | 61.3  | 93.9 | 8.15  | 16.30 | Diazo with Sulphanilic Acid                    |
|                      | mg/dl  | 4.54   | 3.59  | 5.49 | 0.48  | 0.95  |  |
| 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  |  |
| Chloride             | mmol/l | 115    | 105   | 125  | 5.00  | 10.00 | ISE indirect                                   |
| Cholesterol          | mmol/l | 7.14   | 6.21  | 8.07 | 0.47  | 0.93  | Dimension-Siemens reagents                     |
|                      | mg/dl  | 276    | 240   | 312  | 18.00 | 36.00 |  |
| CK Total             | U/l    | 505    | 414   | 596  | 45.50 | 91.00 | CK-NAC (IFCC) 37°C                             |
| Creatinine           | µmol/l | 389    | 311   | 467  | 39.00 | 78.00 | Alkaline picrate no deproteinization           |
|                      | mg/dl  | 4.40   | 3.51  | 5.29 | 0.45  | 0.89  |  |



## SIEMENS DIMENSION EXL®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| Creatinine          | µmol/l | 387    | 310   | 464  | 38.50 | 77.00 | Enzymatic UV method                                 |
|                     | mg/dl  | 4.37   | 3.50  | 5.24 | 0.44  | 0.87  |   |
| gamma-GT            | U/l    | 183    | 155   | 211  | 14.00 | 28.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                     | U/l    | 216    | 184   | 248  | 16.00 | 32.00 | 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 | 3.29   | 2.80  | 3.78 | 0.25  | 0.49  | Direct HDL PPD                                      |
|                     | mg/dl  | 127    | 108   | 146  | 9.50  | 19.00 |   |
|                     | mmol/l | 3.33   | 2.83  | 3.83 | 0.25  | 0.50  | Direct HDL PEGME                                    |
| Iron                | mg/dl  | 129    | 109   | 149  | 10.00 | 20.00 |   |
|                     | µmol/l | 35.1   | 28.8  | 41.4 | 3.15  | 6.30  | Colorimetric with ppt.                              |
|                     | µg/dl  | 196    | 161   | 231  | 17.50 | 35.00 |   |
| Lactate             | µmol/l | 35.1   | 28.8  | 41.4 | 3.15  | 6.30  | Colorimetric without ppt.                           |
|                     | µg/dl  | 196    | 161   | 231  | 17.50 | 35.00 |   |
|                     | mmol/l | 5.50   | 4.51  | 6.49 | 0.50  | 0.99  | UV LDH  |
| LD (LDH)            | mg/dl  | 49.6   | 40.6  | 58.6 | 4.50  | 9.00  |   |
|                     | U/l    | 351    | 299   | 403  | 26.00 | 52.00 | Siemens Dimension L-P Non IFCC 37°C                 |
| Lipase              | U/l    | 340    | 289   | 391  | 25.50 | 51.00 | L->P IFCC 37°C                                      |
|                     | U/l    | 247    | 198   | 296  | 24.50 | 49.00 | Colorimetric Siemens Dimension (LIPL Kit) 37°C      |
| Magnesium           | mmol/l | 1.72   | 1.51  | 1.93 | 0.11  | 0.21  | Methylthymol blue                                   |
|                     | mg/dl  | 4.18   | 3.67  | 4.69 | 0.26  | 0.51  |   |
| Phosphate Inorganic | mmol/l | 2.23   | 1.90  | 2.56 | 0.17  | 0.33  | Phosphomolybdate UV                                 |
|                     | mg/dl  | 6.91   | 5.89  | 7.93 | 0.51  | 1.02  |   |
| Potassium           | mmol/l | 6.23   | 5.73  | 6.73 | 0.25  | 0.50  | ISE method - indirect                               |

## SIEMENS DIMENSION EXL®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte           | unit   | Target | Range |      | 1SD   | 2SD   | methods                                 |
|-------------------|--------|--------|-------|------|-------|-------|---|
|                   |        |        | low   | high |       |       |   |
| Protein Total     | g/l    | 46.1   | 36.9  | 55.3 | 4.60  | 9.20  | Biuret reaction end point               |
|                   | g/dl   | 4.61   | 3.69  | 5.53 | 0.46  | 0.92  |   |
| Sodium            | mmol/l | 160    | 152   | 168  | 4.00  | 8.00  | ISE method - indirect                   |
| TIBC              | µmol/l | 42.1   | 33.3  | 50.9 | 4.40  | 8.80  | Removal of excess free iron             |
|                   | µg/dl  | 235    | 186   | 284  | 24.50 | 49.00 |   |
| Triglycerides     | mmol/l | 2.85   | 2.40  | 3.30 | 0.23  | 0.45  | Lipase/GPO-PAP no correction            |
|                   | mg/dl  | 252    | 212   | 292  | 20.00 | 40.00 |   |
|                   | mmol/l | 2.91   | 2.44  | 3.38 | 0.24  | 0.47  | L/G Kinase EP. no correction            |
|                   | mg/dl  | 258    | 216   | 300  | 21.00 | 42.00 |   |
| 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  |   |
| Uric Acid (Urate) | mmol/l | 0.54   | 0.47  | 0.62 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase |
|                   | mg/dl  | 9.14   | 7.95  | 10.3 | 0.60  | 1.19  |   |
|                   | mmol/l | 0.55   | 0.48  | 0.62 | 0.04  | 0.07  | Spectrophotometric at 280-290           |
|                   | mg/dl  | 9.19   | 8.00  | 10.4 | 0.60  | 1.19  |   |

## SIEMENS DIMENSION RxL/Max/Xpand®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte              | unit   | Target | Range |      | 1SD   | 2SD   | methods  |
|----------------------|--------|--------|-------|------|-------|-------|--|
|                      |        |        | low   | high |       |       |  |
| Albumin              | g/l    | 29.0   | 24.6  | 33.4 | 2.20  | 4.40  | Bromocresol Green                              |
|                      | g/dl   | 2.90   | 2.46  | 3.34 | 0.22  | 0.44  |  |
|                      | g/l    | 27.3   | 23.2  | 31.4 | 2.05  | 4.10  | Bromocresol Purple                             |
|                      | g/dl   | 2.73   | 2.32  | 3.14 | 0.21  | 0.41  |  |
| Alkaline Phosphatase | U/l    | 287    | 244   | 330  | 21.50 | 43.00 | Siemens Dimension AMP buffer 37°C              |
|                      | U/l    | 288    | 245   | 331  | 21.50 | 43.00 | AMP optimised to IFCC 37°C                     |
|                      | U/l    | 273    | 232   | 314  | 20.50 | 41.00 | Randox AMP 37°C                                |
| ALT (GPT)            | U/l    | 143    | 114   | 172  | 14.50 | 29.00 | Tris buffer with P5P 37°C                      |
|                      | U/l    | 145    | 116   | 174  | 14.50 | 29.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total        | U/l    | 332    | 282   | 382  | 25.00 | 50.00 | Siemens 2-chloro-pNPG3 37°C                    |
| AST (GOT)            | U/l    | 182    | 146   | 218  | 18.00 | 36.00 | Tris buffer with P5P 37°C                      |
|                      | U/l    | 185    | 148   | 222  | 18.50 | 37.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate          | mmol/l | 19.2   | 15.2  | 23.2 | 2.00  | 4.00  | Enzymatic                                      |
| Bilirubin Direct     | µmol/l | 15.9   | 12.6  | 19.2 | 1.65  | 3.30  | Diazo with Sulphanilic Acid                    |
|                      | mg/dl  | 0.930  | 0.737 | 1.12 | 0.10  | 0.19  |  |
| Bilirubin Total      | µmol/l | 77.8   | 61.4  | 94.2 | 8.20  | 16.40 | Diazo with Sulphanilic Acid                    |
|                      | mg/dl  | 4.55   | 3.59  | 5.51 | 0.48  | 0.96  |  |
| Calcium              | mmol/l | 3.10   | 2.79  | 3.41 | 0.16  | 0.31  | Cresolphthalein complexone                     |
|                      | mg/dl  | 12.4   | 11.2  | 13.6 | 0.60  | 1.20  |  |
| Chloride             | mmol/l | 116    | 106   | 126  | 5.00  | 10.00 | ISE indirect                                   |
| Cholesterol          | mmol/l | 7.18   | 6.25  | 8.11 | 0.47  | 0.93  | Dimension-Siemens reagents                     |
|                      | mg/dl  | 277    | 241   | 313  | 18.00 | 36.00 |  |

## SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| CK Total            | U/l    | 519    | 426   | 612  | 46.50 | 93.00 | CK-NAC (IFCC) 37°C                                  |
| Creatinine          | μmol/l | 386    | 309   | 463  | 38.50 | 77.00 | Alkaline picrate no deproteinization                |
|                     | mg/dl  | 4.36   | 3.49  | 5.23 | 0.44  | 0.87  |   |
|                     | μmol/l | 379    | 304   | 454  | 37.50 | 75.00 | Enzymatic UV method                                 |
|                     | mg/dl  | 4.28   | 3.44  | 5.12 | 0.42  | 0.84  |   |
| gamma-GT            | μmol/l | 390    | 312   | 468  | 39.00 | 78.00 | Jaffe rate blanked                                  |
|                     | mg/dl  | 4.41   | 3.53  | 5.29 | 0.44  | 0.88  |   |
| glucose             | U/l    | 184    | 157   | 211  | 13.50 | 27.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
|                     | U/l    | 216    | 183   | 249  | 16.50 | 33.00 | Siemens Dimension (non IFCC) 37°C                   |
| 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 | 3.44   | 2.93  | 3.95 | 0.26  | 0.51  | Direct HDL PPD                                      |
|                     | mg/dl  | 133    | 113   | 153  | 10.00 | 20.00 |   |
|                     | mmol/l | 3.39   | 2.88  | 3.90 | 0.26  | 0.51  | Direct HDL PEGME                                    |
|                     | mg/dl  | 131    | 111   | 151  | 10.00 | 20.00 |   |
| Iron                | μmol/l | 35.1   | 28.8  | 41.4 | 3.15  | 6.30  | Colorimetric without ppt.                           |
|                     | μg/dl  | 196    | 161   | 231  | 17.50 | 35.00 |   |
| LD (LDH)            | U/l    | 360    | 306   | 414  | 27.00 | 54.00 | Siemens Dimension L-P Non IFCC 37°C                 |
|                     | U/l    | 350    | 297   | 403  | 26.50 | 53.00 | L->P IFCC 37°C                                      |
| Lipase              | U/l    | 247    | 198   | 296  | 24.50 | 49.00 | Colorimetric Siemens Dimension (LIPL Kit) 37°C      |
| Magnesium           | mmol/l | 1.74   | 1.53  | 1.95 | 0.11  | 0.21  | Methylthymol blue                                   |
|                     | mg/dl  | 4.23   | 3.72  | 4.74 | 0.26  | 0.51  |   |
| Phosphate Inorganic | mmol/l | 2.25   | 1.91  | 2.59 | 0.17  | 0.34  | Phosphomolybdate enzymatic                          |
|                     | mg/dl  | 6.98   | 5.92  | 8.04 | 0.53  | 1.06  |   |

## SIEMENS DIMENSION RxL/Max/Xpand®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods   |
|---------------------|--------|--------|-------|------|-------|-------|---|
|                     |        |        | low   | high |       |       |   |
| Phosphate Inorganic | mmol/l | 2.26   | 1.93  | 2.59 | 0.17  | 0.33  | Phosphomolybdate UV                               |
|                     | mg/dl  | 7.01   | 5.98  | 8.04 | 0.52  | 1.03  |   |
| Potassium           | mmol/l | 6.19   | 5.70  | 6.68 | 0.25  | 0.49  | ISE method - indirect                             |
| Protein Total       | g/l    | 45.8   | 36.6  | 55.0 | 4.60  | 9.20  | Biuret reaction end point                         |
|                     | g/dl   | 4.58   | 3.66  | 5.50 | 0.46  | 0.92  |   |
| Sodium              | mmol/l | 159    | 151   | 167  | 4.00  | 8.00  | ISE method - indirect                             |
| TIBC                | µmol/l | 40.4   | 31.9  | 48.9 | 4.25  | 8.50  | Removal of excess free iron                       |
|                     | µg/dl  | 226    | 178   | 274  | 24.00 | 48.00 |   |
| Triglycerides       | mmol/l | 2.94   | 2.47  | 3.41 | 0.24  | 0.47  | Lipase/GPO-PAP no correction                      |
|                     | mg/dl  | 260    | 219   | 301  | 20.50 | 41.00 |   |
|                     | mmol/l | 2.92   | 2.45  | 3.39 | 0.24  | 0.47  | L/G Kinase EP. no correction                      |
|                     | mg/dl  | 258    | 217   | 299  | 20.50 | 41.00 |   |
|                     | mmol/l | 2.90   | 2.43  | 3.37 | 0.24  | 0.47  | Lipase/Glycerol Dehydrogenase                     |
|                     | mg/dl  | 257    | 215   | 299  | 21.00 | 42.00 |   |
| 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 | 19.8   | 16.8  | 22.8 | 1.50  | 3.00  | Urease kinetic                                    |
|                     | mg/dl  | 119    | 101   | 137  | 9.00  | 18.00 |   |
|                     | mmol/l | 19.8   | 16.8  | 22.8 | 1.50  | 3.00  | BUN   |
|                     | mg/dl  | 55.6   | 47.3  | 63.9 | 4.15  | 8.30  |   |
| Uric Acid (Urate)   | 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  | Spectrophotometric at 280-290                     |
|                     | mg/dl  | 9.14   | 7.95  | 10.3 | 0.60  | 1.19  |   |
|                     | mmol/l | 0.56   | 0.48  | 0.63 | 0.04  | 0.07  | Uricase Peroxidase with ascorbate oxidase @ 546nm |
|                     | mg/dl  | 9.36   | 8.13  | 10.6 | 0.61  | 1.23  |   |

## SIEMENS DIMENSION Vista®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

### Range

| Analyte              | unit   | Target | low   | high | 1SD   | 2SD   | methods                           |
|----------------------|--------|--------|-------|------|-------|-------|-----------------------------------|
| Albumin              | g/l    | 26.3   | 22.3  | 30.3 | 2.00  | 4.00  | Bromocresol Purple                |
|                      | g/dl   | 2.63   | 2.23  | 3.03 | 0.20  | 0.40  |                                   |
| Alkaline Phosphatase | U/l    | 287    | 244   | 330  | 21.50 | 43.00 | Siemens Dimension AMP buffer 37°C |
| Bicarbonate          | mmol/l | 17.6   | 13.9  | 21.3 | 1.85  | 3.70  | Enzymatic                         |
| Bilirubin Direct     | µmol/l | 17.5   | 13.8  | 21.2 | 1.85  | 3.70  | Diazo with Sulphanilic Acid       |
|                      | mg/dl  | 1.02   | 0.807 | 1.23 | 0.11  | 0.21  |                                   |
| Bilirubin Total      | µmol/l | 75.7   | 59.8  | 91.6 | 7.95  | 15.90 | Diazo with Sulphanilic Acid       |
|                      | mg/dl  | 4.43   | 3.50  | 5.36 | 0.47  | 0.93  |                                   |
| Calcium              | mmol/l | 3.01   | 2.71  | 3.31 | 0.15  | 0.30  | Cresolphthalein complexone        |
|                      | mg/dl  | 12.1   | 10.9  | 13.3 | 0.60  | 1.20  |                                   |
| Chloride             | mmol/l | 115    | 106   | 124  | 4.50  | 9.00  | ISE indirect                      |
| CK Total             | U/l    | 523    | 429   | 617  | 47.00 | 94.00 | CK-NAC (IFCC) 37°C                |
| Creatinine           | µmol/l | 394    | 316   | 472  | 39.00 | 78.00 | Jaffe rate blanked                |
|                      | mg/dl  | 4.45   | 3.57  | 5.33 | 0.44  | 0.88  |                                   |
| Glucose              | mmol/l | 15.2   | 12.9  | 17.5 | 1.15  | 2.30  | Hexokinase                        |
|                      | mg/dl  | 274    | 232   | 316  | 21.00 | 42.00 |                                   |
| HDL - Cholesterol    | mmol/l | 3.33   | 2.83  | 3.83 | 0.25  | 0.50  | Direct HDL PEGME                  |
|                      | mg/dl  | 129    | 109   | 149  | 10.00 | 20.00 |                                   |
| Iron                 | µmol/l | 35.1   | 28.8  | 41.4 | 3.15  | 6.30  | Colorimetric without ppt.         |
|                      | µg/dl  | 196    | 161   | 231  | 17.50 | 35.00 |                                   |
| LD (LDH)             | U/l    | 352    | 299   | 405  | 26.50 | 53.00 | L->P IFCC 37°C                    |

## SIEMENS DIMENSION Vista®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte             | unit   | Target | Range |      | 1SD   | 2SD   | methods  |
|---------------------|--------|--------|-------|------|-------|-------|--|
|                     |        |        | low   | high |       |       |  |
| Lipase              | U/l    | 308    | 247   | 369  | 30.50 | 61.00 | Colorimetric Siemens Dimension (LIPL Kit) 37°C |
| Magnesium           | mmol/l | 1.81   | 1.59  | 2.03 | 0.11  | 0.22  | Methylthymol blue                              |
|                     | mg/dl  | 4.40   | 3.86  | 4.94 | 0.27  | 0.54  |  |
| Phosphate Inorganic | mmol/l | 2.18   | 1.85  | 2.51 | 0.17  | 0.33  | Phosphomolybdate UV                            |
|                     | mg/dl  | 6.76   | 5.74  | 7.78 | 0.51  | 1.02  |  |
| Potassium           | mmol/l | 6.02   | 5.54  | 6.50 | 0.24  | 0.48  | ISE method - indirect                          |
| Protein Total       | g/l    | 45.8   | 36.6  | 55.0 | 4.60  | 9.20  | Biuret reaction end point                      |
|                     | g/dl   | 4.58   | 3.66  | 5.50 | 0.46  | 0.92  |  |
| Sodium              | mmol/l | 157    | 149   | 165  | 4.00  | 8.00  | ISE method - indirect                          |
| Urea                | mmol/l | 19.7   | 16.7  | 22.7 | 1.50  | 3.00  | Urease kinetic                                 |
|                     | mg/dl  | 118    | 100   | 136  | 9.00  | 18.00 |  |
|                     | mmol/l | 19.7   | 16.7  | 22.7 | 1.50  | 3.00  | BUN  |
|                     | mg/dl  | 55.3   | 47.0  | 63.6 | 4.15  | 8.30  |  |
| Uric Acid (Urate)   | mmol/l | 0.54   | 0.47  | 0.61 | 0.04  | 0.07  | Uricase peroxidase no ascorbate oxidase        |
|                     | mg/dl  | 9.09   | 7.91  | 10.3 | 0.59  | 1.18  |  |

## VITALAB FLEXOR®

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

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

| Analyte         | unit   | Target | Range |      | 1SD   | 2SD   | methods                              |
|-----------------|--------|--------|-------|------|-------|-------|--------------------------------------|
|                 |        |        | low   | high |       |       |                                      |
| Albumin         | g/l    | 29.8   | 25.3  | 34.3 | 2.25  | 4.50  | Bromocresol Green                    |
|                 | g/dl   | 2.98   | 2.53  | 3.43 | 0.23  | 0.45  |                                      |
| ALT (GPT)       | U/l    | 140    | 112   | 168  | 14.00 | 28.00 | Tris buffer without P5P 37°C         |
| AST (GOT)       | U/l    | 146    | 117   | 175  | 14.50 | 29.00 | Tris buffer without P5P 37°C         |
| Bilirubin Total | µmol/l | 82.7   | 65.3  | 100  | 8.70  | 17.40 | Diazo with Sulphanilic Acid          |
|                 | mg/dl  | 4.84   | 3.82  | 5.86 | 0.51  | 1.02  |                                      |
| Calcium         | mmol/l | 3.07   | 2.76  | 3.38 | 0.16  | 0.31  | Arsenazo III                         |
|                 | mg/dl  | 12.3   | 11.1  | 13.5 | 0.60  | 1.20  |                                      |
| Cholesterol     | mmol/l | 7.58   | 6.60  | 8.56 | 0.49  | 0.98  | Cholesterol Oxidase                  |
|                 | mg/dl  | 293    | 255   | 331  | 19.00 | 38.00 |                                      |
| Creatinine      | µmol/l | 369    | 295   | 443  | 37.00 | 74.00 | Alkaline picrate no deproteinization |
|                 | mg/dl  | 4.17   | 3.33  | 5.01 | 0.42  | 0.84  |                                      |
| Glucose         | mmol/l | 15.8   | 13.4  | 18.2 | 1.20  | 2.40  | Glucose oxidase                      |
|                 | mg/dl  | 285    | 241   | 329  | 22.00 | 44.00 |                                      |
| LD (LDH)        | U/l    | 370    | 315   | 425  | 27.50 | 55.00 | L->P IFCC 37°C                       |
| Protein Total   | g/l    | 48.0   | 38.4  | 57.6 | 4.80  | 9.60  | Biuret reaction end point            |
|                 | g/dl   | 4.80   | 3.84  | 5.76 | 0.48  | 0.96  |                                      |
| Triglycerides   | mmol/l | 2.79   | 2.34  | 3.24 | 0.23  | 0.45  | Lipase/GPO-PAP no correction         |
|                 | mg/dl  | 247    | 207   | 287  | 20.00 | 40.00 |                                      |
| Urea            | mmol/l | 19.2   | 16.3  | 22.1 | 1.45  | 2.90  | Urease kinetic                       |
|                 | mg/dl  | 115    | 98.0  | 132  | 8.50  | 17.00 |                                      |



**VITALAB FLEXOR®**

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 947UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2021-05-28

**Range**

| Analyte | unit   | Target | low  | high | 1SD  | 2SD  | methods |
|---------|--------|--------|------|------|------|------|---------|
| Urea    | mmol/l | 19.2   | 16.3 | 22.1 | 1.45 | 2.90 | BUN     |
|         | mg/dl  | 53.9   | 45.8 | 62.0 | 4.05 | 8.10 |         |