RANDOX 0086 CE

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

**CAT. NO.** HN1530 **GTIN:** 05055273203783 **SIZE:** 20 x 5ml
**CAT. NO.** HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
**LOT NO.** 1180UN **EXPIRY:** 2020-12-28

## INTENDED USE

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

## DEVICE DESCRIPTION

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

## SAFETY PRECAUTIONS AND WARNINGS

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

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

Health and Safety Data Sheets are available on request.

## STORAGE AND STABILITY

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

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

## LIMITATIONS

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

## PREPARATION FOR USE

The Human Assayed Multi-sera is supplied lyophilised.

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

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

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

## MATERIALS PROVIDED

Human Assayed Multi-sera - Level 2 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 ±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.

## NOTES

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

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## Abbott Architect c/ci Systems®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 42.7 | 36.3 | 49.1 | 3.20 | 6.40 | Bromocresol Green |
| | g/dl | 4.27 | 3.63 | 4.91 | 0.32 | 0.64 | |
| | g/l | 43.4 | 36.9 | 49.9 | 3.25 | 6.50 | Bromocresol Purple |
| | g/dl | 4.34 | 3.69 | 4.99 | 0.33 | 0.65 | |
| Alkaline Phosphatase | U/l | 159 | 135 | 183 | 12.00 | 24.00 | AMP optimised to IFCC 37°C |
| | U/l | 157 | 133 | 181 | 12.00 | 24.00 | AMP non-optimised 37°C |
| ALT (GPT) | U/l | 35 | 28 | 42 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 69 | 59 | 79 | 5.00 | 10.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 99 | 84 | 114 | 7.50 | 15.00 | Abbott Architect Non-IFCC Cal. 37°C |
| | U/l | 108 | 91 | 125 | 8.50 | 17.00 | Abbott Architect IFCC Cal. 37°C |
| AST (GOT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 14.0 | 11.1 | 16.9 | 1.45 | 2.90 | Enzymatic |
| Bile Acids | µmol/l | 27.7 | 22.2 | 33.2 | 2.75 | 5.50 | Enzymatic Colorimetric |
| Bilirubin Direct | µmol/l | 19.2 | 15.2 | 23.2 | 2.00 | 4.00 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.12 | 0.889 | 1.35 | 0.12 | 0.23 | |
| | µmol/l | 18.4 | 14.6 | 22.2 | 1.90 | 3.80 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.08 | 0.854 | 1.31 | 0.11 | 0.23 | |
| | µmol/l | 18.4 | 14.5 | 22.3 | 1.95 | 3.90 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.08 | 0.848 | 1.31 | 0.12 | 0.23 | |
| Bilirubin Total | µmol/l | 25.1 | 19.8 | 30.4 | 2.65 | 5.30 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.47 | 1.16 | 1.78 | 0.16 | 0.31 | |



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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 25.1 | 19.8 | 30.4 | 2.65 | 5.30 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.47 | 1.16 | 1.78 | 0.16 | 0.31 | |
| | µmol/l | 25.6 | 20.2 | 31.0 | 2.70 | 5.40 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.50 | 1.18 | 1.82 | 0.16 | 0.32 | |
| | µmol/l | 24.9 | 19.6 | 30.2 | 2.65 | 5.30 | Diazonium ion |
| | mg/dl | 1.46 | 1.15 | 1.77 | 0.16 | 0.31 | |
| Calcium | mmol/l | 2.12 | 1.91 | 2.33 | 0.11 | 0.21 | Arsenazo III |
| | mg/dl | 8.50 | 7.66 | 9.34 | 0.42 | 0.84 | |
| Chloride | mmol/l | 100 | 92.4 | 108 | 3.80 | 7.60 | ISE indirect |
| Cholesterol | mmol/l | 4.09 | 3.56 | 4.62 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 158 | 137 | 179 | 10.50 | 21.00 | |
| Cholinesterase | U/l | 6723 | 5378 | 8068 | 672.50 | 1345.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 209 | 171 | 247 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| Copper | µmol/l | 14.6 | 11.7 | 17.5 | 1.45 | 2.90 | Colorimetric |
| | µg/dl | 92.9 | 74.4 | 111 | 9.25 | 18.50 | |
| Creatinine | µmol/l | 136 | 109 | 163 | 13.50 | 27.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.54 | 1.23 | 1.85 | 0.16 | 0.31 | |
| | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Creatinine PAP method |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 137 | 110 | 164 | 13.50 | 27.00 | Jaffe rate blanked |
| | mg/dl | 1.55 | 1.24 | 1.86 | 0.16 | 0.31 | |
| | µmol/l | 136 | 109 | 163 | 13.50 | 27.00 | IDMS traceable |
| | mg/dl | 1.54 | 1.23 | 1.85 | 0.16 | 0.31 | |



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## Abbott Architect c/ci Systems®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 51 | 43 | 59 | 4.00 | 8.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 50 | 42 | 58 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 6.00 | 5.10 | 6.90 | 0.45 | 0.90 | Hexokinase |
| | mg/dl | 108 | 91.9 | 124 | 8.05 | 16.10 | |
| | mmol/l | 6.23 | 5.30 | 7.16 | 0.47 | 0.93 | Glucose oxidase |
| | mg/dl | 112 | 95.5 | 129 | 8.25 | 16.50 | |
| HDL - Cholesterol | mmol/l | 1.37 | 1.17 | 1.57 | 0.10 | 0.20 | Direct HDL PPD |
| | mg/dl | 52.9 | 45.2 | 60.6 | 3.85 | 7.70 | |
| | mmol/l | 1.37 | 1.16 | 1.58 | 0.11 | 0.21 | Direct Clearance Method |
| | mg/dl | 52.9 | 44.8 | 61.0 | 4.05 | 8.10 | |
| | mmol/l | 1.35 | 1.15 | 1.55 | 0.10 | 0.20 | HDL - Ultra |
| | mg/dl | 52.1 | 44.4 | 59.8 | 3.85 | 7.70 | |
| Iron | µmol/l | 18.8 | 15.4 | 22.2 | 1.70 | 3.40 | Colorimetric with ppt. |
| | µg/dl | 105 | 86.1 | 124 | 9.45 | 18.90 | |
| | µmol/l | 18.5 | 15.2 | 21.8 | 1.65 | 3.30 | Colorimetric without ppt. |
| | µg/dl | 103 | 85.0 | 121 | 9.00 | 18.00 | |
| Lactate | mmol/l | 1.48 | 1.22 | 1.74 | 0.13 | 0.26 | Colorimetric Lactate Oxidase |
| | mg/dl | 13.3 | 11.0 | 15.6 | 1.15 | 2.30 | |
| LD (LDH) | U/l | 187 | 159 | 215 | 14.00 | 28.00 | L->P 37°C |
| | U/l | 188 | 160 | 216 | 14.00 | 28.00 | L->P IFCC 37°C |
| Lipase | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Other Colorimetric 37°C |
| Lithium | mmol/l | 1.10 | 0.97 | 1.23 | 0.06 | 0.13 | Spectrophotometric |
| | mg/dl | 0.764 | 0.675 | 0.853 | 0.04 | 0.09 | |
| Magnesium | mmol/l | 0.92 | 0.81 | 1.03 | 0.06 | 0.11 | Arsenazo III |
| | mg/dl | 2.23 | 1.97 | 2.49 | 0.13 | 0.26 | |



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**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 0.90 | 0.79 | 1.01 | 0.05 | 0.11 | Enzymatic |
| | mg/dl | 2.19 | 1.92 | 2.46 | 0.14 | 0.27 | |
| Osmolality | mOsm/kg | 300 | 240 | 360 | 30.00 | 60.00 | Calculated |
| Phosphate Inorganic | mmol/l | 1.46 | 1.24 | 1.68 | 0.11 | 0.22 | Phosphomolybdate enzymatic |
| | mg/dl | 4.53 | 3.84 | 5.22 | 0.35 | 0.69 | |
| | mmol/l | 1.47 | 1.25 | 1.69 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.56 | 3.88 | 5.24 | 0.34 | 0.68 | |
| Potassium | mmol/l | 4.11 | 3.78 | 4.44 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 59.6 | 47.7 | 71.5 | 5.95 | 11.90 | Biuret reaction end point |
| | g/dl | 5.96 | 4.77 | 7.15 | 0.60 | 1.19 | |
| PSA Total | ng/ml = | 12.0 | 9.00 | 15.0 | 1.50 | 3.00 | Abbott Architect |
| Sodium | mmol/l | 144 | 136 | 152 | 4.00 | 8.00 | ISE method - indirect |
| Thyroid Stimulating Hormone | µU/ml = | 1.18 | 0.95 | 1.42 | 0.12 | 0.24 | Abbott Architect |
| TIBC | µmol/l | 49.7 | 39.2 | 60.2 | 5.25 | 10.50 | FE+UIBC(saturation with iron) |
| | µg/dl | 278 | 219 | 337 | 29.50 | 59.00 | |
| Triglycerides | mmol/l | 1.06 | 0.89 | 1.23 | 0.08 | 0.17 | Lipase/GPO-PAP no correction |
| | mg/dl | 93.8 | 78.9 | 109 | 7.45 | 14.90 | |
| | mmol/l | 1.06 | 0.89 | 1.23 | 0.08 | 0.17 | L/G Kinase EP. no correction |
| | mg/dl | 93.8 | 79.1 | 109 | 7.35 | 14.70 | |
| | mmol/l | 1.08 | 0.91 | 1.25 | 0.08 | 0.17 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 95.6 | 80.6 | 111 | 7.50 | 15.00 | |
| Urea | mmol/l | 7.19 | 6.11 | 8.27 | 0.54 | 1.08 | Urease kinetic |
| | mg/dl | 43.2 | 36.7 | 49.7 | 3.25 | 6.50 | |
| | mmol/l | 7.19 | 6.11 | 8.27 | 0.54 | 1.08 | BUN |
| | mg/dl | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | |



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**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.64 | 4.92 | 6.36 | 0.36 | 0.72 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.66 | 4.94 | 6.38 | 0.36 | 0.72 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.68 | 4.94 | 6.42 | 0.37 | 0.74 | |



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## ABX Pentra 400®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 43.1 | 36.6 | 49.6 | 3.25 | 6.50 | Bromocresol Green |
| | g/dl | 4.31 | 3.66 | 4.96 | 0.33 | 0.65 | |
| Alkaline Phosphatase | U/l | 160 | 136 | 184 | 12.00 | 24.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| AST (GOT) | U/l | 38 | 31 | 45 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| Bilirubin Total | µmol/l | 25.5 | 20.1 | 30.9 | 2.70 | 5.40 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.49 | 1.18 | 1.80 | 0.16 | 0.31 | |
| Calcium | mmol/l | 2.10 | 1.89 | 2.31 | 0.11 | 0.21 | Arsenazo III |
| | mg/dl | 8.42 | 7.58 | 9.26 | 0.42 | 0.84 | |
| Cholesterol | mmol/l | 4.17 | 3.63 | 4.71 | 0.27 | 0.54 | Cholesterol Oxidase |
| | mg/dl | 161 | 140 | 182 | 10.50 | 21.00 | |
| CK Total | U/l | 207 | 170 | 244 | 18.50 | 37.00 | CK-NAC (IFCC) 37°C |
| Glucose | mmol/l | 6.04 | 5.13 | 6.95 | 0.46 | 0.91 | Glucose oxidase |
| | mg/dl | 109 | 92.4 | 126 | 8.30 | 16.60 | |
| Phosphate Inorganic | mmol/l | 1.59 | 1.35 | 1.83 | 0.12 | 0.24 | Phosphomolybdate UV |
| | mg/dl | 4.93 | 4.19 | 5.67 | 0.37 | 0.74 | |
| Potassium | mmol/l | 3.88 | 3.57 | 4.19 | 0.16 | 0.31 | ISE method - direct |
| Sodium | mmol/l | 140 | 133 | 147 | 3.50 | 7.00 | ISE method - direct |
| Triglycerides | mmol/l | 1.08 | 0.91 | 1.25 | 0.09 | 0.17 | Lipase/GPO-PAP no correction |
| | mg/dl | 95.6 | 80.5 | 111 | 7.55 | 15.10 | |
| Urea | mmol/l | 7.18 | 6.10 | 8.26 | 0.54 | 1.08 | Urease kinetic |
| | mg/dl | 43.2 | 36.7 | 49.7 | 3.25 | 6.50 | |



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**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Urea | mmol/l | 7.18 | 6.10 | 8.26 | 0.54 | 1.08 | BUN |
| | mg/dl | 20.2 | 17.2 | 23.2 | 1.50 | 3.00 | |



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## Beckman Coulter AU Series®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 41.8 | 35.5 | 48.1 | 3.15 | 6.30 | Bromocresol Green |
| | g/dl | 4.18 | 3.55 | 4.81 | 0.32 | 0.63 | |
| | g/l | 46.6 | 39.6 | 53.6 | 3.50 | 7.00 | Bromocresol Purple |
| | g/dl | 4.66 | 3.96 | 5.36 | 0.35 | 0.70 | |
| Alkaline Phosphatase | U/l | 268 | 228 | 308 | 20.00 | 40.00 | Diethanolamine buffer DEA 37°C |
| | U/l | 193 | 164 | 222 | 14.50 | 29.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| Amylase Total | U/l | 88 | 75 | 101 | 6.50 | 13.00 | pNP Maltotrioside substrates 37°C |
| | U/l | 87 | 74 | 100 | 6.50 | 13.00 | Biotrol - blocked pNPG7 37°C |
| | U/l | 83 | 71 | 95 | 6.00 | 12.00 | Beckman Synchron CX4/CX5/CX7 37°C |
| | U/l | 92 | 78 | 106 | 7.00 | 14.00 | Beckman Coulter - blocked pNPG7 37°C |
| AST (GOT) | U/l | 39 | 32 | 46 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 14.8 | 11.7 | 17.9 | 1.55 | 3.10 | Enzymatic |
| Bilirubin Direct | µmol/l | 19.6 | 15.5 | 23.7 | 2.05 | 4.10 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.15 | 0.907 | 1.39 | 0.12 | 0.24 | |
| Bilirubin Total | µmol/l | 28.6 | 22.6 | 34.6 | 3.00 | 6.00 | DPD (Beckman AU) |
| | mg/dl | 1.67 | 1.32 | 2.02 | 0.18 | 0.35 | |
| Calcium | mmol/l | 2.18 | 1.96 | 2.40 | 0.11 | 0.22 | Cresolphthalein complexone |
| | mg/dl | 8.74 | 7.86 | 9.62 | 0.44 | 0.88 | |
| | mmol/l | 2.18 | 1.96 | 2.40 | 0.11 | 0.22 | Arsenazo III |
| | mg/dl | 8.74 | 7.86 | 9.62 | 0.44 | 0.88 | |



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**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Chloride | mmol/l | 98.0 | 90.1 | 106 | 3.95 | 7.90 | ISE indirect |
| Cholesterol | mmol/l | 4.12 | 3.59 | 4.65 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 159 | 139 | 179 | 10.00 | 20.00 | |
| CK Total | U/l | 235 | 192 | 278 | 21.50 | 43.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 213 | 175 | 251 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 132 | 105 | 159 | 13.50 | 27.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.49 | 1.19 | 1.79 | 0.15 | 0.30 | |
| | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 126 | 101 | 151 | 12.50 | 25.00 | Creatinine PAP method |
| | mg/dl | 1.42 | 1.14 | 1.70 | 0.14 | 0.28 | |
| | µmol/l | 132 | 105 | 159 | 13.50 | 27.00 | Jaffe rate blanked |
| | mg/dl | 1.49 | 1.19 | 1.79 | 0.15 | 0.30 | |
| | µmol/l | 125 | 100 | 150 | 12.50 | 25.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 1.41 | 1.13 | 1.69 | 0.14 | 0.28 | |
| | µmol/l | 127 | 102 | 152 | 12.50 | 25.00 | IDMS traceable |
| | mg/dl | 1.44 | 1.15 | 1.73 | 0.15 | 0.29 | |
| D-3-Hydroxybutyrate | mmol/l | 0.30 | 0.25 | 0.34 | 0.02 | 0.05 | Tris buffer 100mmol pH 8.5 |
| gamma-GT | U/l | 53 | 45 | 61 | 4.00 | 8.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 44 | 37 | 51 | 3.50 | 7.00 | Gamma glutamyl-4-nitroanilide 37°C |
| | U/l | 53 | 45 | 61 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| GLDH | U/l | 16 | 13 | 19 | 1.50 | 3.00 | Triethanolamine buffer 50 mmol 37°C |
| Glucose | mmol/l | 6.23 | 5.29 | 7.17 | 0.47 | 0.94 | Hexokinase |
| | mg/dl | 112 | 95.3 | 129 | 8.35 | 16.70 | |
| | mmol/l | 6.17 | 5.24 | 7.10 | 0.47 | 0.93 | Glucose oxidase |
| | mg/dl | 111 | 94.4 | 128 | 8.30 | 16.60 | |



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## Beckman Coulter AU Series®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 1.36 | 1.15 | 1.57 | 0.11 | 0.21 | Direct HDL Immunoseparation |
| | mg/dl | 52.5 | 44.4 | 60.6 | 4.05 | 8.10 | |
| | mmol/l | 1.38 | 1.17 | 1.59 | 0.11 | 0.21 | Direct Clearance Method |
| | mg/dl | 53.3 | 45.2 | 61.4 | 4.05 | 8.10 | |
| | mmol/l | 1.36 | 1.16 | 1.56 | 0.10 | 0.20 | HDL - Ultra |
| | mg/dl | 52.5 | 44.8 | 60.2 | 3.85 | 7.70 | |
| Iron | µmol/l | 18.3 | 15.0 | 21.6 | 1.65 | 3.30 | Colorimetric with ppt. |
| | µg/dl | 102 | 83.9 | 120 | 9.05 | 18.10 | |
| | µmol/l | 18.5 | 15.1 | 21.9 | 1.70 | 3.40 | Colorimetric without ppt. |
| | µg/dl | 103 | 84.4 | 122 | 9.30 | 18.60 | |
| Lactate | mmol/l | 1.42 | 1.16 | 1.68 | 0.13 | 0.26 | Colorimetric Lactate Oxidase |
| | mg/dl | 12.8 | 10.5 | 15.1 | 1.15 | 2.30 | |
| LD (LDH) | U/l | 185 | 157 | 213 | 14.00 | 28.00 | L->P 37°C |
| | U/l | 409 | 347 | 471 | 31.00 | 62.00 | P->L Scandinavian & Dutch 37°C |
| | U/l | 189 | 160 | 218 | 14.50 | 29.00 | L->P IFCC 37°C |
| Lipase | U/l | 34 | 28 | 40 | 3.00 | 6.00 | Other Colorimetric 37°C |
| | U/l | 42 | 34 | 50 | 4.00 | 8.00 | Randox Colorimetric 37°C |
| Lithium | mmol/l | 1.04 | 0.92 | 1.16 | 0.06 | 0.12 | Spectrophotometric |
| | mg/dl | 0.722 | 0.637 | 0.807 | 0.04 | 0.09 | |
| Magnesium | mmol/l | 0.95 | 0.84 | 1.07 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.32 | 2.04 | 2.60 | 0.14 | 0.28 | |
| Phosphate Inorganic | mmol/l | 1.45 | 1.23 | 1.67 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.50 | 3.81 | 5.19 | 0.35 | 0.69 | |
| Potassium | mmol/l | 4.07 | 3.74 | 4.40 | 0.17 | 0.33 | ISE method - indirect |



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## Beckman Coulter AU Series®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Protein Total | g/l | 59.6 | 47.7 | 71.5 | 5.95 | 11.90 | Biuret reaction end point |
| | g/dl | 5.96 | 4.77 | 7.15 | 0.60 | 1.19 | |
| Sodium | mmol/l | 143 | 136 | 150 | 3.50 | 7.00 | ISE method - indirect |
| TIBC | µmol/l | 48.8 | 38.6 | 59.0 | 5.10 | 10.20 | FE+UIBC(saturation with iron) |
| | µg/dl | 273 | 216 | 330 | 28.50 | 57.00 | |
| Triglycerides | mmol/l | 1.11 | 0.93 | 1.29 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 98.2 | 82.6 | 114 | 7.80 | 15.60 | |
| | mmol/l | 1.14 | 0.96 | 1.33 | 0.09 | 0.19 | L/G Kinase EP. no correction |
| | mg/dl | 101 | 84.5 | 118 | 8.25 | 16.50 | |
| UIBC | µmol/l | 31.4 | 25.7 | 37.1 | 2.85 | 5.70 | Direct Colorimetric |
| | µg/dl | 176 | 144 | 208 | 16.00 | 32.00 | |
| Urea | mmol/l | 7.40 | 6.29 | 8.51 | 0.56 | 1.11 | Urease end point |
| | mg/dl | 44.5 | 37.8 | 51.2 | 3.35 | 6.70 | |
| | mmol/l | 7.25 | 6.16 | 8.34 | 0.55 | 1.09 | Urease kinetic |
| | mg/dl | 43.6 | 37.0 | 50.2 | 3.30 | 6.60 | |
| | mmol/l | 7.25 | 6.16 | 8.34 | 0.55 | 1.09 | BUN |
| | mg/dl | 20.3 | 17.3 | 23.3 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.35 | 0.30 | 0.39 | 0.02 | 0.05 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.81 | 5.06 | 6.56 | 0.38 | 0.75 | |
| | mmol/l | 0.35 | 0.30 | 0.39 | 0.02 | 0.05 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.80 | 5.04 | 6.56 | 0.38 | 0.76 | |



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

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.2 | 37.6 | 50.8 | 3.30 | 6.60 | Bromocresol Green |
| | g/dl | 4.42 | 3.76 | 5.08 | 0.33 | 0.66 | |
| | g/l | 45.9 | 39.0 | 52.8 | 3.45 | 6.90 | Bromocresol Purple |
| | g/dl | 4.59 | 3.90 | 5.28 | 0.35 | 0.69 | |
| Alkaline Phosphatase | U/l | 177 | 150 | 204 | 13.50 | 27.00 | AMP optimised to IFCC 37°C |
| | U/l | 175 | 149 | 201 | 13.00 | 26.00 | AMP non-optimised 37°C |
| ALT (GPT) | U/l | 35 | 28 | 42 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 34 | 27 | 41 | 3.50 | 7.00 | Tris buffer SCE 37°C |
| Amylase Total | U/l | 96 | 82 | 110 | 7.00 | 14.00 | Beckman Synchron AMY7 37°C |
| AST (GOT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer SCE 37°C |
| Bicarbonate | mmol/l | 14.4 | 11.5 | 17.3 | 1.45 | 2.90 | Differential rate pH change |
| | mmol/l | 15.3 | 12.1 | 18.5 | 1.60 | 3.20 | Ion selective electrode |
| Bilirubin Direct | µmol/l | 13.7 | 10.8 | 16.6 | 1.45 | 2.90 | Diazo with Sulphanilic Acid |
| | mg/dl | 0.801 | 0.632 | 0.970 | 0.08 | 0.17 | |
| Bilirubin Total | µmol/l | 28.9 | 22.8 | 35.0 | 3.05 | 6.10 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.69 | 1.33 | 2.05 | 0.18 | 0.36 | |
| Calcium | mmol/l | 2.12 | 1.91 | 2.33 | 0.11 | 0.21 | Ion selective electrode |
| | mg/dl | 8.50 | 7.66 | 9.34 | 0.42 | 0.84 | |
| Chloride | mmol/l | 99.2 | 91.3 | 107 | 3.95 | 7.90 | ISE indirect |
| Cholesterol | mmol/l | 4.02 | 3.50 | 4.54 | 0.26 | 0.52 | Cholesterol Oxidase |
| | mg/dl | 155 | 135 | 175 | 10.00 | 20.00 | |



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

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| CK Total | U/l | 201 | 164 | 238 | 18.50 | 37.00 | CK-NAC (IFCC) 37°C |
| | U/l | 211 | 173 | 249 | 19.00 | 38.00 | Monothioglycerol 37°C |
| Creatinine | µmol/l | 128 | 102 | 154 | 13.00 | 26.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.45 | 1.15 | 1.75 | 0.15 | 0.30 | |
| | µmol/l | 127 | 101 | 153 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.44 | 1.14 | 1.74 | 0.15 | 0.30 | |
| | µmol/l | 128 | 102 | 154 | 13.00 | 26.00 | Jaffe rate blanked |
| | mg/dl | 1.45 | 1.15 | 1.75 | 0.15 | 0.30 | |
| | µmol/l | 127 | 102 | 152 | 12.50 | 25.00 | IDMS traceable |
| | mg/dl | 1.44 | 1.15 | 1.73 | 0.15 | 0.29 | |
| Free T4 | pmol/l | 20.5 | 15.4 | 25.6 | 2.55 | 5.10 | Beckman DxI800 |
| | ng/dl | 1.60 | 1.20 | 2.00 | 0.20 | 0.40 | |
| | pg/ml | 16.0 | 12.0 | 20.0 | 2.00 | 4.00 | Beckman DxI800 |
| gamma-GT | U/l | 43 | 37 | 49 | 3.00 | 6.00 | Gamma glutamyl-4-nitroanilide 37°C |
| Glucose | mmol/l | 5.96 | 5.07 | 6.85 | 0.45 | 0.89 | Hexokinase |
| | mg/dl | 107 | 91.4 | 123 | 7.80 | 15.60 | |
| | mmol/l | 5.92 | 5.03 | 6.81 | 0.45 | 0.89 | Oxygen electrode |
| | mg/dl | 107 | 90.6 | 123 | 8.20 | 16.40 | |
| | mmol/l | 5.93 | 5.04 | 6.82 | 0.45 | 0.89 | Glucose oxidase |
| | mg/dl | 107 | 90.8 | 123 | 8.10 | 16.20 | |
| HDL - Cholesterol | mmol/l | 1.40 | 1.19 | 1.61 | 0.11 | 0.21 | Direct HDL PPD |
| | mg/dl | 54.0 | 45.9 | 62.1 | 4.05 | 8.10 | |
| | mmol/l | 1.40 | 1.19 | 1.61 | 0.11 | 0.21 | HDL - Ultra |
| | mg/dl | 54.0 | 45.9 | 62.1 | 4.05 | 8.10 | |



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

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Iron | µmol/l | 17.9 | 14.7 | 21.1 | 1.60 | 3.20 | Colorimetric without ppt. |
| | µg/dl | 100 | 82.2 | 118 | 8.90 | 17.80 | |
| Lactate | mmol/l | 1.41 | 1.16 | 1.66 | 0.13 | 0.25 | Colorimetric Lactate Oxidase |
| | mg/dl | 12.7 | 10.5 | 14.9 | 1.10 | 2.20 | |
| LD (LDH) | U/l | 161 | 137 | 185 | 12.00 | 24.00 | L->P 37°C |
| | U/l | 497 | 422 | 572 | 37.50 | 75.00 | Pyruvate 1.4 mM - Beckman LD-P 37°C |
| Lipase | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Other Colorimetric 37°C |
| Magnesium | mmol/l | 0.92 | 0.81 | 1.04 | 0.06 | 0.11 | Calmagite |
| | mg/dl | 2.25 | 1.98 | 2.52 | 0.14 | 0.27 | |
| Osmolality | mOsm/kg | 286 | 229 | 343 | 28.50 | 57.00 | Calculated |
| Phosphate Inorganic | mmol/l | 1.50 | 1.28 | 1.72 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.65 | 3.97 | 5.33 | 0.34 | 0.68 | |
| Potassium | mmol/l | 4.04 | 3.72 | 4.36 | 0.16 | 0.32 | ISE method - indirect |
| Protein Total | g/l | 60.5 | 48.4 | 72.6 | 6.05 | 12.10 | Biuret reaction CX4/5/7 |
| | g/dl | 6.05 | 4.84 | 7.26 | 0.61 | 1.21 | |
| | g/l | 60.6 | 48.5 | 72.7 | 6.05 | 12.10 | Biuret reaction end point |
| | g/dl | 6.06 | 4.85 | 7.27 | 0.61 | 1.21 | |
| | g/l | 58.4 | 46.7 | 70.1 | 5.85 | 11.70 | Biuret reaction kinetic |
| | g/dl | 5.84 | 4.67 | 7.01 | 0.59 | 1.17 | |
| Sodium | mmol/l | 142 | 135 | 149 | 3.50 | 7.00 | ISE method - indirect |
| Thyroid Stimulating Hormone | µU/ml = | 1.24 | 0.99 | 1.49 | 0.13 | 0.25 | Beckman DxI800 Hyper TSH |
| Triglycerides | mmol/l | 1.15 | 0.97 | 1.33 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 102 | 85.5 | 119 | 8.25 | 16.50 | |
| | mmol/l | 1.15 | 0.96 | 1.34 | 0.09 | 0.19 | L/G Kinase EP. no correction |
| | mg/dl | 102 | 85.3 | 119 | 8.35 | 16.70 | |



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

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Urea | mmol/l | 7.66 | 6.51 | 8.81 | 0.58 | 1.15 | Urease end point |
| | mg/dl | 46.0 | 39.1 | 52.9 | 3.45 | 6.90 | |
| | mmol/l | 7.61 | 6.47 | 8.75 | 0.57 | 1.14 | Urease kinetic |
| | mg/dl | 45.7 | 38.9 | 52.5 | 3.40 | 6.80 | |
| | mmol/l | 7.61 | 6.47 | 8.75 | 0.57 | 1.14 | BUN |
| | mg/dl | 21.4 | 18.2 | 24.6 | 1.60 | 3.20 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.28 | 0.37 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.46 | 4.74 | 6.18 | 0.36 | 0.72 | |



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## BIOSYSTEMS A25

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 40.7 | 34.6 | 46.8 | 3.05 | 6.10 | Bromocresol Green |
| | g/dl | 4.07 | 3.46 | 4.68 | 0.31 | 0.61 | |
| Alkaline Phosphatase | U/l | 167 | 142 | 192 | 12.50 | 25.00 | AMP optimised to IFCC 37°C |
| | U/l | 130 | 111 | 149 | 9.50 | 19.00 | AMP optimised to IFCC 30°C |
| | U/l | 107 | 91 | 123 | 8.00 | 16.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 40 | 32 | 48 | 4.00 | 8.00 | Tris buffer without P5P 37°C |
| | U/l | 30 | 24 | 36 | 3.00 | 6.00 | Tris buffer without P5P 30°C |
| | U/l | 23 | 18 | 28 | 2.50 | 5.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 44 | 35 | 53 | 4.50 | 9.00 | Tris buffer without P5P 37°C |
| | U/l | 30 | 24 | 36 | 3.00 | 6.00 | Tris buffer without P5P 30°C |
| | U/l | 21 | 17 | 25 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 19.9 | 15.8 | 24.0 | 2.05 | 4.10 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.16 | 0.924 | 1.40 | 0.12 | 0.24 | |
| Bilirubin Total | µmol/l | 29.4 | 23.3 | 35.5 | 3.05 | 6.10 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.72 | 1.36 | 2.08 | 0.18 | 0.36 | |
| Calcium | mmol/l | 2.12 | 1.91 | 2.33 | 0.11 | 0.21 | Arsenazo III |
| | mg/dl | 8.50 | 7.66 | 9.34 | 0.42 | 0.84 | |
| Cholesterol | mmol/l | 4.08 | 3.55 | 4.61 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 157 | 137 | 177 | 10.00 | 20.00 | |
| CK Total | U/l | 224 | 184 | 264 | 20.00 | 40.00 | CK-NAC (IFCC) 37°C |
| | U/l | 140 | 115 | 165 | 12.50 | 25.00 | CK-NAC (IFCC) 30°C |
| | U/l | 95 | 78 | 112 | 8.50 | 17.00 | CK-NAC (IFCC) 25°C |



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## BIOSYSTEMS A25

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 123 | 98.4 | 148 | 12.30 | 24.60 | Alkaline picrate no deproteinization |
| | mg/dl | 1.39 | 1.11 | 1.67 | 0.14 | 0.28 | |
| gamma-GT | U/l | 54 | 46 | 62 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 43 | 36 | 50 | 3.50 | 7.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 33 | 28 | 38 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 6.40 | 5.44 | 7.36 | 0.48 | 0.96 | Glucose oxidase |
| | mg/dl | 115 | 98.0 | 132 | 8.50 | 17.00 | |
| Phosphate Inorganic | mmol/l | 1.53 | 1.30 | 1.76 | 0.12 | 0.23 | Phosphomolybdate UV |
| | mg/dl | 4.74 | 4.03 | 5.45 | 0.36 | 0.71 | |
| Protein Total | g/l | 58.2 | 46.6 | 69.8 | 5.80 | 11.60 | Biuret reaction end point |
| | g/dl | 5.82 | 4.66 | 6.98 | 0.58 | 1.16 | |
| Triglycerides | mmol/l | 1.11 | 0.93 | 1.29 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 98.2 | 82.4 | 114 | 7.90 | 15.80 | |
| Urea | mmol/l | 6.80 | 5.78 | 7.82 | 0.51 | 1.02 | Urease kinetic |
| | mg/dl | 40.9 | 34.7 | 47.1 | 3.10 | 6.20 | |
| | mmol/l | 6.80 | 5.78 | 7.82 | 0.51 | 1.02 | BUN |
| | mg/dl | 19.1 | 16.2 | 22.0 | 1.45 | 2.90 | |
| Uric Acid (Urate) | mmol/l | 0.36 | 0.31 | 0.41 | 0.02 | 0.05 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 6.05 | 5.26 | 6.84 | 0.40 | 0.79 | |
| | mmol/l | 0.36 | 0.31 | 0.41 | 0.02 | 0.05 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 6.01 | 5.22 | 6.80 | 0.40 | 0.79 | |



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RANDOX

## COBAS INTEGRA®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.3 | 37.7 | 50.9 | 3.30 | 6.60 | Bromocresol Green |
| | g/dl | 4.43 | 3.77 | 5.09 | 0.33 | 0.66 | |
| | g/l | 41.1 | 35.0 | 47.2 | 3.05 | 6.10 | Turbidimetric Assays |
| | g/dl | 4.11 | 3.50 | 4.72 | 0.31 | 0.61 | |
| Alkaline Phosphatase | U/l | 121 | 103 | 139 | 9.00 | 18.00 | Roche Integra AMP buffer 37°C |
| | U/l | 94 | 80 | 108 | 7.00 | 14.00 | Roche Integra AMP buffer 30°C |
| | U/l | 77 | 66 | 88 | 5.50 | 11.00 | Roche Integra AMP buffer 25°C |
| | U/l | 116 | 99 | 133 | 8.50 | 17.00 | AMP optimised to IFCC 37°C |
| | U/l | 90 | 77 | 103 | 6.50 | 13.00 | AMP optimised to IFCC 30°C |
| | U/l | 74 | 63 | 85 | 5.50 | 11.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 32 | 25 | 39 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 19 | 29 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 18 | 14 | 22 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 69 | 59 | 79 | 5.00 | 10.00 | Roche liquid stable pNPG7 37°C |
| Amylase Total | U/l | 87 | 74 | 100 | 6.50 | 13.00 | Saccharogenic 37°C |
| | U/l | 91 | 77 | 105 | 7.00 | 14.00 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 90 | 77 | 103 | 6.50 | 13.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 34 | 27 | 41 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 23 | 18 | 28 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 16 | 13 | 19 | 1.50 | 3.00 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 14.1 | 11.2 | 17.0 | 1.45 | 2.90 | Enzymatic |



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## COBAS INTEGRA®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Direct | µmol/l | 17.9 | 14.1 | 21.7 | 1.90 | 3.80 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.05 | 0.825 | 1.28 | 0.11 | 0.23 | |
| | µmol/l | 17.7 | 14.0 | 21.4 | 1.85 | 3.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.04 | 0.819 | 1.26 | 0.11 | 0.22 | |
| Bilirubin Total | µmol/l | 25.0 | 19.8 | 30.2 | 2.60 | 5.20 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 25.1 | 19.9 | 30.3 | 2.60 | 5.20 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.47 | 1.16 | 1.78 | 0.16 | 0.31 | |
| | µmol/l | 24.9 | 19.7 | 30.1 | 2.60 | 5.20 | Diazonium ion |
| | mg/dl | 1.46 | 1.15 | 1.77 | 0.16 | 0.31 | |
| Calcium | mmol/l | 2.14 | 1.92 | 2.36 | 0.11 | 0.22 | Cresolphthalein complexone |
| | mg/dl | 8.58 | 7.70 | 9.46 | 0.44 | 0.88 | |
| | mmol/l | 2.12 | 1.91 | 2.33 | 0.11 | 0.21 | NM-BAPTA |
| | mg/dl | 8.50 | 7.66 | 9.34 | 0.42 | 0.84 | |
| Chloride | mmol/l | 98.8 | 90.9 | 107 | 3.95 | 7.90 | ISE indirect |
| Cholesterol | mmol/l | 4.15 | 3.61 | 4.69 | 0.27 | 0.54 | Cholesterol Oxidase |
| | mg/dl | 160 | 139 | 181 | 10.50 | 21.00 | |
| CK Total | U/l | 211 | 173 | 249 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| | U/l | 132 | 108 | 156 | 12.00 | 24.00 | CK-NAC (IFCC) 30°C |
| | U/l | 90 | 74 | 106 | 8.00 | 16.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 125 | 100 | 150 | 12.50 | 25.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.41 | 1.13 | 1.69 | 0.14 | 0.28 | |
| | µmol/l | 131 | 105 | 157 | 13.00 | 26.00 | Roche Creatinine Plus |
| | mg/dl | 1.48 | 1.19 | 1.77 | 0.15 | 0.29 | |
| | µmol/l | 125 | 99.9 | 150 | 12.55 | 25.10 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 1.41 | 1.13 | 1.69 | 0.14 | 0.28 | |



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## COBAS INTEGRA®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 47 | 40 | 54 | 3.50 | 7.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 37 | 32 | 42 | 2.50 | 5.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 29 | 25 | 33 | 2.00 | 4.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 52 | 44 | 60 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 41 | 35 | 47 | 3.00 | 6.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 32 | 27 | 37 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 6.16 | 5.23 | 7.09 | 0.47 | 0.93 | Hexokinase |
| | mg/dl | 111 | 94.2 | 128 | 8.40 | 16.80 | |
| HDL - Cholesterol | mmol/l | 1.67 | 1.42 | 1.92 | 0.13 | 0.25 | Direct HDL PEGME |
| | mg/dl | 64.5 | 54.8 | 74.2 | 4.85 | 9.70 | |
| | mmol/l | 1.70 | 1.44 | 1.96 | 0.13 | 0.26 | Direct HDL Roche 3rd generation |
| | mg/dl | 65.6 | 55.6 | 75.6 | 5.00 | 10.00 | |
| Iron | µmol/l | 19.0 | 15.6 | 22.4 | 1.70 | 3.40 | Colorimetric with ppt. |
| | µg/dl | 106 | 87.2 | 125 | 9.40 | 18.80 | |
| | µmol/l | 19.0 | 15.6 | 22.4 | 1.70 | 3.40 | Colorimetric without ppt. |
| | µg/dl | 106 | 87.2 | 125 | 9.40 | 18.80 | |
| Lactate | mmol/l | 1.53 | 1.26 | 1.80 | 0.14 | 0.27 | Colorimetric Lactate Oxidase |
| | mg/dl | 13.8 | 11.4 | 16.2 | 1.20 | 2.40 | |
| LD (LDH) | U/l | 354 | 301 | 407 | 26.50 | 53.00 | P->L German methods 37°C |
| | U/l | 256 | 217 | 295 | 19.50 | 39.00 | P->L German methods 30°C |
| | U/l | 179 | 153 | 205 | 13.00 | 26.00 | P->L German methods 25°C |
| | U/l | 199 | 169 | 229 | 15.00 | 30.00 | L->P IFCC 37°C |
| | U/l | 144 | 122 | 166 | 11.00 | 22.00 | L->P IFCC 30°C |
| | U/l | 101 | 86 | 116 | 7.50 | 15.00 | L->P IFCC 25°C |



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## COBAS INTEGRA®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Lipase | U/l | 35 | 28 | 42 | 3.50 | 7.00 | Roche Colorimetric 37°C |
| Lithium | mmol/l | 1.07 | 0.94 | 1.20 | 0.06 | 0.13 | Ion selective electrode |
| | mg/dl | 0.743 | 0.655 | 0.831 | 0.04 | 0.09 | |
| Magnesium | mmol/l | 0.94 | 0.82 | 1.05 | 0.06 | 0.11 | Chlorphosphonazo III |
| | mg/dl | 2.27 | 2.00 | 2.54 | 0.14 | 0.27 | |
| Phosphate Inorganic | mmol/l | 1.49 | 1.27 | 1.71 | 0.11 | 0.22 | Phosphomolybdate enzymatic |
| | mg/dl | 4.62 | 3.94 | 5.30 | 0.34 | 0.68 | |
| | mmol/l | 1.51 | 1.28 | 1.74 | 0.12 | 0.23 | Phosphomolybdate UV |
| | mg/dl | 4.68 | 3.97 | 5.39 | 0.36 | 0.71 | |
| Potassium | mmol/l | 4.09 | 3.76 | 4.42 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 58.1 | 46.5 | 69.7 | 5.80 | 11.60 | Biuret reaction end point |
| | g/dl | 5.81 | 4.65 | 6.97 | 0.58 | 1.16 | |
| | g/l | 58.1 | 46.5 | 69.7 | 5.80 | 11.60 | Biuret reaction kinetic |
| | g/dl | 5.81 | 4.65 | 6.97 | 0.58 | 1.16 | |
| Sodium | mmol/l | 143 | 136 | 150 | 3.50 | 7.00 | ISE method - indirect |
| TIBC | µmol/l | 47.0 | 37.2 | 56.8 | 4.90 | 9.80 | FE+UIBC(saturation with iron) |
| | µg/dl | 263 | 208 | 318 | 27.50 | 55.00 | |
| Triglycerides | mmol/l | 1.10 | 0.93 | 1.28 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 97.4 | 81.9 | 113 | 7.75 | 15.50 | |
| | mmol/l | 1.10 | 0.92 | 1.28 | 0.09 | 0.18 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 97.4 | 81.5 | 113 | 7.95 | 15.90 | |
| Urea | mmol/l | 6.77 | 5.75 | 7.79 | 0.51 | 1.02 | Urease kinetic |
| | mg/dl | 40.7 | 34.6 | 46.8 | 3.05 | 6.10 | |
| | mmol/l | 6.77 | 5.75 | 7.79 | 0.51 | 1.02 | BUN |
| | mg/dl | 19.0 | 16.2 | 21.8 | 1.40 | 2.80 | |



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## COBAS INTEGRA®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.66 | 4.92 | 6.40 | 0.37 | 0.74 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.68 | 4.94 | 6.42 | 0.37 | 0.74 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.68 | 4.94 | 6.42 | 0.37 | 0.74 | |



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# Elitech/Vitalab Selectra Series

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.0 | 37.4 | 50.6 | 3.30 | 6.60 | Bromocresol Green |
| | g/dl | 4.40 | 3.74 | 5.06 | 0.33 | 0.66 | |
| Alkaline Phosphatase | U/l | 276 | 234 | 318 | 21.00 | 42.00 | Diethanolamine buffer DEA 37°C |
| ALT (GPT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| AST (GOT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| Calcium | mmol/l | 2.21 | 1.99 | 2.43 | 0.11 | 0.22 | Arsenazo III |
| | mg/dl | 8.86 | 7.98 | 9.74 | 0.44 | 0.88 | |
| Cholesterol | mmol/l | 4.14 | 3.60 | 4.68 | 0.27 | 0.54 | Cholesterol Oxidase |
| | mg/dl | 160 | 139 | 181 | 10.50 | 21.00 | |
| Glucose | mmol/l | 6.41 | 5.45 | 7.37 | 0.48 | 0.96 | Glucose oxidase |
| | mg/dl | 116 | 98.2 | 134 | 8.90 | 17.80 | |
| HDL - Cholesterol | mmol/l | 1.22 | 1.04 | 1.40 | 0.09 | 0.18 | HDL - Ultra |
| | mg/dl | 47.1 | 40.1 | 54.1 | 3.50 | 7.00 | |
| Phosphate Inorganic | mmol/l | 1.48 | 1.26 | 1.70 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.59 | 3.91 | 5.27 | 0.34 | 0.68 | |
| Protein Total | g/l | 61.9 | 49.5 | 74.3 | 6.20 | 12.40 | Biuret reaction end point |
| | g/dl | 6.19 | 4.95 | 7.43 | 0.62 | 1.24 | |
| Triglycerides | mmol/l | 1.16 | 0.97 | 1.35 | 0.09 | 0.19 | Lipase/GPO-PAP no correction |
| | mg/dl | 103 | 86.2 | 120 | 8.40 | 16.80 | |
| Urea | mmol/l | 7.11 | 6.05 | 8.17 | 0.53 | 1.06 | Urease kinetic |
| | mg/dl | 42.7 | 36.4 | 49.0 | 3.15 | 6.30 | |



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## Elitech/Vitalab Selectra Series

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Urea | mmol/l | 7.11 | 6.04 | 8.18 | 0.54 | 1.07 | BUN |
| | mg/dl | 20.0 | 17.0 | 23.0 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.35 | 0.30 | 0.39 | 0.02 | 0.05 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.81 | 5.06 | 6.56 | 0.38 | 0.75 | |



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## HITACHI SERIES®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Acid Phosphatase (non-prostatic) | U/l | 3.88 | 2.60 | 5.16 | 0.64 | 1.28 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| | U/l | 3.87 | 2.59 | 5.15 | 0.64 | 1.28 | 1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C |
| Acid Phosphatase (Prostatic) | U/l | 10.7 | 7.17 | 14.2 | 1.77 | 3.53 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| | U/l | 18.9 | 12.7 | 25.1 | 3.10 | 6.20 | 1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C |
| Acid Phosphatase (Total) | U/l | 14.6 | 9.78 | 19.4 | 2.41 | 4.82 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| | U/l | 22.8 | 15.3 | 30.3 | 3.75 | 7.50 | 1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C |
| Albumin | g/l | 43.7 | 37.2 | 50.2 | 3.25 | 6.50 | Bromocresol Green |
| | g/dl | 4.37 | 3.72 | 5.02 | 0.33 | 0.65 | |
| Alkaline Phosphatase | U/l | 108 | 92 | 124 | 8.00 | 16.00 | Roche Integra AMP buffer 37°C |
| | U/l | 84 | 72 | 96 | 6.00 | 12.00 | Roche Integra AMP buffer 30°C |
| | U/l | 69 | 59 | 79 | 5.00 | 10.00 | Roche Integra AMP buffer 25°C |
| | U/l | 181 | 154 | 208 | 13.50 | 27.00 | Randox AMP 37°C |
| | U/l | 141 | 120 | 162 | 10.50 | 21.00 | Randox AMP 30°C |
| | U/l | 116 | 98 | 134 | 9.00 | 18.00 | Randox AMP 25°C |
| ALT (GPT) | U/l | 35 | 28 | 42 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 26 | 21 | 31 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 20 | 16 | 24 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 79 | 67 | 91 | 6.00 | 12.00 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 88 | 75 | 101 | 6.50 | 13.00 | Roche liquid stable pNPG7 37°C |
| | U/l | 99 | 84 | 114 | 7.50 | 15.00 | Randox Liquid Ethylidene pNPG7 37°C |
| AST (GOT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer without P5P 30°C |
| | U/l | 17 | 14 | 20 | 1.50 | 3.00 | Tris buffer without P5P 25°C |



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## HITACHI SERIES®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bicarbonate | mmol/l | 15.2 | 12.1 | 18.3 | 1.55 | 3.10 | Enzymatic |
| Bile Acids | µmol/l | 23.6 | 18.9 | 28.3 | 2.35 | 4.70 | 5th Generation Colorimetric |
| Bilirubin Direct | µmol/l | 18.3 | 14.5 | 22.1 | 1.90 | 3.80 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.07 | 0.848 | 1.29 | 0.11 | 0.22 | |
| | µmol/l | 17.6 | 13.9 | 21.3 | 1.85 | 3.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.03 | 0.813 | 1.25 | 0.11 | 0.22 | |
| Bilirubin Total | µmol/l | 24.6 | 19.5 | 29.7 | 2.55 | 5.10 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.44 | 1.14 | 1.74 | 0.15 | 0.30 | |
| | µmol/l | 24.5 | 19.4 | 29.6 | 2.55 | 5.10 | Diazonium ion |
| | mg/dl | 1.43 | 1.13 | 1.73 | 0.15 | 0.30 | |
| Calcium | mmol/l | 2.18 | 1.96 | 2.40 | 0.11 | 0.22 | Cresolphthalein complexone |
| | mg/dl | 8.74 | 7.86 | 9.62 | 0.44 | 0.88 | |
| | mmol/l | 2.17 | 1.95 | 2.39 | 0.11 | 0.22 | NM-BAPTA |
| | mg/dl | 8.70 | 7.82 | 9.58 | 0.44 | 0.88 | |
| Chloride | mmol/l | 94.8 | 87.2 | 102 | 3.80 | 7.60 | ISE indirect |
| Cholesterol | mmol/l | 4.10 | 3.57 | 4.63 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 158 | 138 | 178 | 10.00 | 20.00 | |
| CK Total | U/l | 199 | 163 | 235 | 18.00 | 36.00 | CK-NAC (IFCC) 37°C |
| | U/l | 125 | 102 | 148 | 11.50 | 23.00 | CK-NAC (IFCC) 30°C |
| | U/l | 85 | 69 | 101 | 8.00 | 16.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 132 | 106 | 158 | 13.00 | 26.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 1.49 | 1.20 | 1.78 | 0.15 | 0.29 | |
| gamma-GT | U/l | 45 | 38 | 52 | 3.50 | 7.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 35 | 30 | 40 | 2.50 | 5.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 28 | 23 | 33 | 2.50 | 5.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |



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## HITACHI SERIES®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 49 | 41 | 57 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 39 | 32 | 46 | 3.50 | 7.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 30 | 25 | 35 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| | U/l | 59 | 50 | 68 | 4.50 | 9.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 46 | 39 | 53 | 3.50 | 7.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 36 | 31 | 41 | 2.50 | 5.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| Glucose | mmol/l | 6.12 | 5.20 | 7.04 | 0.46 | 0.92 | Hexokinase |
| | mg/dl | 110 | 93.7 | 126 | 8.15 | 16.30 | |
| | mmol/l | 6.22 | 5.28 | 7.16 | 0.47 | 0.94 | Glucose oxidase |
| | mg/dl | 112 | 95.1 | 129 | 8.45 | 16.90 | |
| HDL - Cholesterol | mmol/l | 1.68 | 1.43 | 1.93 | 0.13 | 0.25 | Direct HDL Roche 3rd generation |
| | mg/dl | 64.8 | 55.2 | 74.4 | 4.80 | 9.60 | |
| Iron | µmol/l | 18.1 | 14.8 | 21.4 | 1.65 | 3.30 | Colorimetric without ppt. |
| | µg/dl | 101 | 82.7 | 119 | 9.15 | 18.30 | |
| Lactate | mmol/l | 1.45 | 1.19 | 1.71 | 0.13 | 0.26 | Colorimetric Lactate Oxidase |
| | mg/dl | 13.1 | 10.7 | 15.5 | 1.20 | 2.40 | |
| LD (LDH) | U/l | 363 | 309 | 417 | 27.00 | 54.00 | P->L German methods 37°C |
| | U/l | 262 | 223 | 301 | 19.50 | 39.00 | P->L German methods 30°C |
| | U/l | 184 | 157 | 211 | 13.50 | 27.00 | P->L German methods 25°C |
| | U/l | 187 | 159 | 215 | 14.00 | 28.00 | L->P IFCC 37°C |
| | U/l | 135 | 115 | 155 | 10.00 | 20.00 | L->P IFCC 30°C |
| | U/l | 95 | 81 | 109 | 7.00 | 14.00 | L->P IFCC 25°C |
| Lipase | U/l | 32 | 26 | 38 | 3.00 | 6.00 | Roche Colorimetric 37°C |



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## HITACHI SERIES®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 0.93 | 0.82 | 1.05 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.27 | 2.00 | 2.54 | 0.14 | 0.27 | |
| Phosphate Inorganic | mmol/l | 1.45 | 1.23 | 1.67 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.50 | 3.81 | 5.19 | 0.35 | 0.69 | |
| Potassium | mmol/l | 4.14 | 3.81 | 4.47 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 59.8 | 47.8 | 71.8 | 6.00 | 12.00 | Biuret reaction end point |
| | g/dl | 5.98 | 4.78 | 7.18 | 0.60 | 1.20 | |
| Sodium | mmol/l | 145 | 138 | 152 | 3.50 | 7.00 | ISE method - indirect |
| TIBC | µmol/l | 45.2 | 35.7 | 54.7 | 4.75 | 9.50 | FE+UIBC(saturation with iron) |
| | µg/dl | 253 | 200 | 306 | 26.50 | 53.00 | |
| Triglycerides | mmol/l | 1.10 | 0.92 | 1.28 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 97.4 | 81.8 | 113 | 7.80 | 15.60 | |
| Urea | mmol/l | 7.39 | 6.28 | 8.50 | 0.56 | 1.11 | Urease kinetic |
| | mg/dl | 44.4 | 37.7 | 51.1 | 3.35 | 6.70 | |
| | mmol/l | 7.39 | 6.28 | 8.50 | 0.56 | 1.11 | BUN |
| | mg/dl | 20.7 | 17.6 | 23.8 | 1.55 | 3.10 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.58 | 4.86 | 6.30 | 0.36 | 0.72 | |
| | mmol/l | 0.33 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.58 | 4.86 | 6.30 | 0.36 | 0.72 | |
| | mmol/l | 0.33 | 0.29 | 0.37 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.54 | 4.82 | 6.26 | 0.36 | 0.72 | |



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## ILab 600®/650®/Aries/Taurus

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 42.4 | 36.0 | 48.8 | 3.20 | 6.40 | Bromocresol Green |
| | g/dl | 4.24 | 3.60 | 4.88 | 0.32 | 0.64 | |
| Alkaline Phosphatase | U/l | 172 | 146 | 198 | 13.00 | 26.00 | AMP optimised to IFCC 37°C |
| | U/l | 134 | 114 | 154 | 10.00 | 20.00 | AMP optimised to IFCC 30°C |
| | U/l | 110 | 93 | 127 | 8.50 | 17.00 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 33 | 27 | 39 | 3.00 | 6.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer without P5P 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 89 | 75 | 103 | 7.00 | 14.00 | I.L. 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer without P5P 30°C |
| | U/l | 17 | 14 | 20 | 1.50 | 3.00 | Tris buffer without P5P 25°C |
| Bile Acids | µmol/l | 25.7 | 20.5 | 30.9 | 2.60 | 5.20 | Enzymatic Colorimetric |
| Bilirubin Total | 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 | |
| Calcium | mmol/l | 2.09 | 1.88 | 2.30 | 0.11 | 0.21 | Cresolphthalein complexone |
| | mg/dl | 8.38 | 7.54 | 9.22 | 0.42 | 0.84 | |
| Chloride | mmol/l | 96.5 | 88.8 | 104 | 3.85 | 7.70 | ISE indirect |
| Cholesterol | mmol/l | 4.06 | 3.53 | 4.59 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 157 | 136 | 178 | 10.50 | 21.00 | |
| CK Total | U/l | 191 | 157 | 225 | 17.00 | 34.00 | CK-NAC (IFCC) 37°C |
| | U/l | 120 | 98 | 142 | 11.00 | 22.00 | CK-NAC (IFCC) 30°C |
| | U/l | 81 | 67 | 95 | 7.00 | 14.00 | CK-NAC (IFCC) 25°C |



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## ILab 600®/650®/Aries/Taurus

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 135 | 108 | 162 | 13.50 | 27.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.53 | 1.22 | 1.84 | 0.16 | 0.31 | |
| D-3-Hydroxybutyrate | mmol/l | 0.30 | 0.26 | 0.35 | 0.02 | 0.05 | Tris buffer 100mmol pH 8.5 |
| gamma-GT | U/l | 47 | 40 | 54 | 3.50 | 7.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 37 | 32 | 42 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 29 | 25 | 33 | 2.00 | 4.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| GLDH | U/l | 16 | 12 | 20 | 2.00 | 4.00 | Triethanolamine buffer 50 mmol 37°C |
| | U/l | 12 | 9 | 15 | 1.50 | 3.00 | Triethanolamine buffer 50 mmol 30°C |
| | U/l | 10 | 7 | 13 | 1.50 | 3.00 | Triethanolamine buffer 50 mmol 25°C |
| Glucose | mmol/l | 6.21 | 5.28 | 7.14 | 0.47 | 0.93 | Hexokinase |
| | mg/dl | 112 | 95.1 | 129 | 8.45 | 16.90 | |
| | mmol/l | 6.08 | 5.17 | 6.99 | 0.46 | 0.91 | Glucose oxidase |
| | mg/dl | 110 | 93.2 | 127 | 8.40 | 16.80 | |
| HDL - Cholesterol | mmol/l | 1.30 | 1.10 | 1.50 | 0.10 | 0.20 | Direct HDL Immunoseparation |
| | mg/dl | 50.2 | 42.5 | 57.9 | 3.85 | 7.70 | |
| Iron | µmol/l | 18.0 | 14.8 | 21.2 | 1.60 | 3.20 | Colorimetric without ppt. |
| | µg/dl | 101 | 82.7 | 119 | 9.15 | 18.30 | |
| LD (LDH) | U/l | 389 | 330 | 448 | 29.50 | 59.00 | P->L German methods 37°C |
| | U/l | 281 | 238 | 324 | 21.50 | 43.00 | P->L German methods 30°C |
| | U/l | 197 | 167 | 227 | 15.00 | 30.00 | P->L German methods 25°C |
| Phosphate Inorganic | mmol/l | 1.47 | 1.25 | 1.69 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.56 | 3.88 | 5.24 | 0.34 | 0.68 | |
| Potassium | mmol/l | 4.18 | 3.84 | 4.52 | 0.17 | 0.34 | ISE method - indirect |



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## ILab 600®/650®/Aries/Taurus

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Protein Total | g/l | 60.1 | 48.1 | 72.1 | 6.00 | 12.00 | Biuret reaction end point |
| | g/dl | 6.01 | 4.81 | 7.21 | 0.60 | 1.20 | |
| Sodium | mmol/l | 144 | 137 | 151 | 3.50 | 7.00 | ISE method - indirect |
| Triglycerides | mmol/l | 1.11 | 0.93 | 1.29 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 98.2 | 82.6 | 114 | 7.80 | 15.60 | |
| Urea | mmol/l | 7.41 | 6.30 | 8.52 | 0.56 | 1.11 | Urease end point |
| | mg/dl | 44.5 | 37.9 | 51.1 | 3.30 | 6.60 | |
| | mmol/l | 7.41 | 6.30 | 8.52 | 0.56 | 1.11 | BUN |
| | mg/dl | 20.8 | 17.7 | 23.9 | 1.55 | 3.10 | |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.30 | 0.39 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.78 | 5.04 | 6.52 | 0.37 | 0.74 | |



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## JOHNSON AND JOHNSON VITROS®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 41.2 | 35.1 | 47.3 | 3.05 | 6.10 | Ortho Vitros Microslide Systems |
| | g/dl | 4.12 | 3.51 | 4.73 | 0.31 | 0.61 | |
| Alkaline Phosphatase | U/l | 127 | 108 | 146 | 9.50 | 19.00 | Ortho Vitros Microslide Systems 37°C |
| ALT (GPT) | U/l | 48 | 38 | 58 | 5.00 | 10.00 | Ortho Vitros Microslide Systems 37°C |
| Amylase Total | U/l | 66 | 56 | 76 | 5.00 | 10.00 | Ortho Vitros Microslide Systems 37°C |
| AST (GOT) | U/l | 54 | 43 | 65 | 5.50 | 11.00 | Ortho Vitros Microslide visible slide 37°C |
| Bicarbonate | mmol/l | 16.1 | 12.7 | 19.5 | 1.70 | 3.40 | Ortho Vitros Microslide Systems |
| Bilirubin Direct | µmol/l | 14.6 | 11.5 | 17.7 | 1.55 | 3.10 | Vitros Total Bil - BU |
| | mg/dl | 0.854 | 0.673 | 1.04 | 0.09 | 0.18 | |
| Bilirubin Total | µmol/l | 25.8 | 20.4 | 31.2 | 2.70 | 5.40 | Vitros 250/500/700/950 Total Bilirubin |
| | mg/dl | 1.51 | 1.19 | 1.83 | 0.16 | 0.32 | |
| | µmol/l | 23.4 | 18.5 | 28.3 | 2.45 | 4.90 | Vitros 250/500/700/950 Total BUBC |
| | mg/dl | 1.37 | 1.08 | 1.66 | 0.15 | 0.29 | |
| Calcium | mmol/l | 2.18 | 1.96 | 2.40 | 0.11 | 0.22 | Ortho Vitros Microslide Systems |
| | mg/dl | 8.74 | 7.86 | 9.62 | 0.44 | 0.88 | |
| Chloride | mmol/l | 98.8 | 90.9 | 107 | 3.95 | 7.90 | Ortho Vitros Microslide Systems |
| Cholesterol | mmol/l | 3.96 | 3.45 | 4.47 | 0.26 | 0.51 | Ortho Vitros Microslide Systems |
| | mg/dl | 153 | 133 | 173 | 10.00 | 20.00 | |
| Cholinesterase | U/l | 5577 | 4461 | 6693 | 558.00 | 1116.00 | Ortho Vitros Microslide Systems 37°C |
| CK Total | U/l | 196 | 161 | 231 | 17.50 | 35.00 | Ortho Vitros Microslide Systems 37°C |
| Creatinine | µmol/l | 127 | 101 | 153 | 13.00 | 26.00 | Vitros IDMS Traceable |
| | mg/dl | 1.44 | 1.14 | 1.74 | 0.15 | 0.30 | |



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## JOHNSON AND JOHNSON VITROS®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Free T4 | pmol/l | 36.6 | 27.5 | 45.7 | 4.55 | 9.10 | Vitros ECi |
| | ng/dl | 2.85 | 2.15 | 3.55 | 0.35 | 0.70 | |
| | pg/ml | 28.5 | 21.5 | 35.5 | 3.50 | 7.00 | Vitros ECi |
| gamma-GT | U/l | 65 | 55 | 75 | 5.00 | 10.00 | Ortho Vitros Microslide Systems 37°C |
| Glucose | mmol/l | 5.98 | 5.08 | 6.88 | 0.45 | 0.90 | Ortho Vitros Microslide Systems |
| | mg/dl | 108 | 91.5 | 125 | 8.25 | 16.50 | |
| HDL - Cholesterol | mmol/l | 1.56 | 1.32 | 1.80 | 0.12 | 0.24 | Vitros Magnetic HDL |
| | mg/dl | 60.2 | 51.0 | 69.4 | 4.60 | 9.20 | |
| | mmol/l | 1.51 | 1.28 | 1.74 | 0.12 | 0.23 | Vitros 5.1 FS microtip assay |
| | mg/dl | 58.3 | 49.4 | 67.2 | 4.45 | 8.90 | |
| | mmol/l | 1.56 | 1.33 | 1.79 | 0.12 | 0.23 | Vitros dHDL PTA/MgCl2 direct precipitation |
| | mg/dl | 60.2 | 51.3 | 69.1 | 4.45 | 8.90 | |
| Iron | µmol/l | 19.4 | 15.9 | 22.9 | 1.75 | 3.50 | Ortho Vitros Microslide Systems |
| | µg/dl | 108 | 88.9 | 127 | 9.55 | 19.10 | |
| Lactate | mmol/l | 1.36 | 1.12 | 1.60 | 0.12 | 0.24 | Ortho Vitros Microslide Systems |
| | mg/dl | 12.3 | 10.1 | 14.5 | 1.10 | 2.20 | |
| LD (LDH) | U/l | 555 | 472 | 638 | 41.50 | 83.00 | Ortho Vitros Microslide Systems 37°C |
| Lipase | U/l | 239 | 192 | 286 | 23.50 | 47.00 | Ortho Vitros Microslide Systems 37°C |
| Lithium | mmol/l | 1.31 | 1.15 | 1.47 | 0.08 | 0.16 | Ortho Vitros Microslide Systems |
| | mg/dl | 0.910 | 0.799 | 1.02 | 0.06 | 0.11 | |
| Magnesium | mmol/l | 0.94 | 0.83 | 1.05 | 0.06 | 0.11 | Ortho Vitros Microslide Systems |
| | mg/dl | 2.28 | 2.00 | 2.56 | 0.14 | 0.28 | |
| Phosphate Inorganic | mmol/l | 1.52 | 1.29 | 1.75 | 0.12 | 0.23 | Ortho Vitros Microslide Systems |
| | mg/dl | 4.71 | 4.00 | 5.42 | 0.36 | 0.71 | |



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## JOHNSON AND JOHNSON VITROS®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Potassium | mmol/l | 4.18 | 3.85 | 4.51 | 0.17 | 0.33 | Ortho Vitros Microslide Systems |
| Protein Total | g/l | 60.3 | 48.2 | 72.4 | 6.05 | 12.10 | Ortho Vitros Microslide Systems |
| | g/dl | 6.03 | 4.82 | 7.24 | 0.61 | 1.21 | |
| PSA Total | ng/ml = | 12.7 | 9.53 | 15.9 | 1.59 | 3.17 | Ortho Vitros 3600/5600/ECi PSA II |
| Sodium | mmol/l | 145 | 138 | 152 | 3.50 | 7.00 | Ortho Vitros Microslide Systems |
| Thyroid Stimulating Hormone | µU/ml = | 1.25 | 1.00 | 1.50 | 0.13 | 0.25 | Vitros ECi |
| TIBC | µmol/l | 53.9 | 42.6 | 65.2 | 5.65 | 11.30 | Ortho Vitros Microslide Systems |
| | µg/dl | 301 | 238 | 364 | 31.50 | 63.00 | |
| Triglycerides | mmol/l | 1.20 | 1.01 | 1.39 | 0.10 | 0.19 | Ortho Vitros Microslide Systems |
| | mg/dl | 106 | 89.4 | 123 | 8.30 | 16.60 | |
| Urea | mmol/l | 6.66 | 5.66 | 7.66 | 0.50 | 1.00 | Ortho Vitros Microslide Systems |
| | mg/dl | 40.0 | 34.0 | 46.0 | 3.00 | 6.00 | |
| | mmol/l | 6.66 | 5.66 | 7.66 | 0.50 | 1.00 | BUN |
| | mg/dl | 18.7 | 15.9 | 21.5 | 1.40 | 2.80 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.28 | 0.37 | 0.02 | 0.04 | Ortho Vitros Microslide Systems |
| | mg/dl | 5.49 | 4.77 | 6.21 | 0.36 | 0.72 | |



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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 41.2 | 35.0 | 47.4 | 3.10 | 6.20 | Bromocresol Green |
| | g/dl | 4.12 | 3.50 | 4.74 | 0.31 | 0.62 | |
| ALT (GPT) | U/l | 38 | 30 | 46 | 4.00 | 8.00 | Tris buffer without P5P 37°C |
| | U/l | 28 | 22 | 34 | 3.00 | 6.00 | Tris buffer without P5P 30°C |
| | U/l | 21 | 17 | 25 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 40 | 32 | 48 | 4.00 | 8.00 | Tris buffer without P5P 37°C |
| | U/l | 27 | 22 | 32 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Bile Acids | µmol/l | 27.0 | 21.6 | 32.4 | 2.70 | 5.40 | Enzymatic Colorimetric |
| Bilirubin Direct | µmol/l | 16.4 | 12.9 | 19.9 | 1.75 | 3.50 | Diazo with Sulphanilic Acid |
| | mg/dl | 0.959 | 0.755 | 1.16 | 0.10 | 0.20 | |
| Bilirubin Total | µmol/l | 24.0 | 19.0 | 29.0 | 2.50 | 5.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.40 | 1.11 | 1.69 | 0.15 | 0.29 | |
| | µmol/l | 22.5 | 17.8 | 27.2 | 2.35 | 4.70 | Nitrobenzenediazonium salt |
| | mg/dl | 1.32 | 1.04 | 1.60 | 0.14 | 0.28 | |
| Calcium | mmol/l | 2.19 | 1.97 | 2.41 | 0.11 | 0.22 | Arsenazo III |
| | mg/dl | 8.78 | 7.90 | 9.66 | 0.44 | 0.88 | |
| Chloride | mmol/l | 102 | 93.6 | 110 | 4.20 | 8.40 | ISE direct |
| Cholesterol | mmol/l | 4.06 | 3.53 | 4.59 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 157 | 136 | 178 | 10.50 | 21.00 | |
| CK Total | U/l | 212 | 174 | 250 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| | U/l | 133 | 109 | 157 | 12.00 | 24.00 | CK-NAC (IFCC) 30°C |
| | U/l | 90 | 74 | 106 | 8.00 | 16.00 | CK-NAC (IFCC) 25°C |



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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 136 | 109 | 163 | 13.50 | 27.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.54 | 1.23 | 1.85 | 0.16 | 0.31 | |
| gamma-GT | U/l | 53 | 45 | 61 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 42 | 35 | 49 | 3.50 | 7.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 33 | 28 | 38 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 6.36 | 5.41 | 7.31 | 0.48 | 0.95 | Hexokinase |
| | mg/dl | 115 | 97.5 | 133 | 8.75 | 17.50 | |
| | mmol/l | 6.27 | 5.33 | 7.21 | 0.47 | 0.94 | Glucose oxidase |
| | mg/dl | 113 | 96.0 | 130 | 8.50 | 17.00 | |
| HDL - Cholesterol | mmol/l | 1.70 | 1.44 | 1.96 | 0.13 | 0.26 | Direct HDL PEGME |
| | mg/dl | 65.6 | 55.6 | 75.6 | 5.00 | 10.00 | |
| Iron | µmol/l | 19.7 | 16.1 | 23.3 | 1.80 | 3.60 | Colorimetric without ppt. |
| | µg/dl | 110 | 90.0 | 130 | 10.00 | 20.00 | |
| Magnesium | mmol/l | 0.94 | 0.82 | 1.05 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.28 | 2.00 | 2.56 | 0.14 | 0.28 | |
| Phosphate Inorganic | mmol/l | 1.51 | 1.29 | 1.73 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.68 | 4.00 | 5.36 | 0.34 | 0.68 | |
| Potassium | mmol/l | 4.00 | 3.68 | 4.32 | 0.16 | 0.32 | ISE method - direct |
| Protein Total | g/l | 60.9 | 48.7 | 73.1 | 6.10 | 12.20 | Biuret reaction end point |
| | g/dl | 6.09 | 4.87 | 7.31 | 0.61 | 1.22 | |
| Sodium | mmol/l | 140 | 133 | 147 | 3.50 | 7.00 | ISE method - direct |
| Triglycerides | mmol/l | 1.10 | 0.93 | 1.27 | 0.09 | 0.17 | Lipase/GPO-PAP no correction |
| | mg/dl | 97.4 | 82.0 | 113 | 7.70 | 15.40 | |



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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Urea | mmol/l | 7.11 | 6.04 | 8.18 | 0.54 | 1.07 | Urease kinetic |
| | mg/dl | 42.7 | 36.3 | 49.1 | 3.20 | 6.40 | |
| | mmol/l | 7.11 | 6.04 | 8.18 | 0.54 | 1.07 | BUN |
| | mg/dl | 20.0 | 17.0 | 23.0 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.35 | 0.30 | 0.39 | 0.02 | 0.05 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.81 | 5.06 | 6.56 | 0.38 | 0.75 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.64 | 4.91 | 6.37 | 0.37 | 0.73 | |
| | mmol/l | 0.33 | 0.28 | 0.37 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.48 | 4.77 | 6.19 | 0.36 | 0.71 | |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| alpha-HBDH | U/l | 213 | 168 | 258 | 22.50 | 45.00 | Oxobutyrate < 10 mmol/l 37°C |
| | U/l | 161 | 127 | 195 | 17.00 | 34.00 | Oxobutyrate < 10 mmol/l 30°C |
| | U/l | 121 | 95 | 147 | 13.00 | 26.00 | Oxobutyrate < 10 mmol/l 25°C |
| Acid Phosphatase (non-prostatic) | U/l | 3.88 | 2.60 | 5.16 | 0.64 | 1.28 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| | U/l | 3.87 | 2.59 | 5.15 | 0.64 | 1.28 | 1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C |
| Acid Phosphatase (Prostatic) | U/l | 10.7 | 7.17 | 14.2 | 1.77 | 3.53 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| | U/l | 18.9 | 12.7 | 25.1 | 3.10 | 6.20 | 1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C |
| Acid Phosphatase (Total) | U/l | 14.6 | 9.78 | 19.4 | 2.41 | 4.82 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| | U/l | 22.8 | 15.3 | 30.3 | 3.75 | 7.50 | 1-Naphthyl Phosphate, Kinetic with Pentane diol Activation 37°C |
| Albumin | g/l | 43.1 | 36.6 | 49.6 | 3.25 | 6.50 | Bromocresol Green |
| | g/dl | 4.31 | 3.66 | 4.96 | 0.33 | 0.65 | |
| | g/l | 44.9 | 38.1 | 51.7 | 3.40 | 6.80 | Bromocresol Purple |
| | g/dl | 4.49 | 3.81 | 5.17 | 0.34 | 0.68 | |
| | g/l | 41.2 | 35.1 | 47.3 | 3.05 | 6.10 | Ortho Vitros Microslide Systems |
| | g/dl | 4.12 | 3.51 | 4.73 | 0.31 | 0.61 | |
| | g/l | 42.0 | 35.7 | 48.3 | 3.15 | 6.30 | Turbidimetric Assays |
| | g/dl | 4.20 | 3.57 | 4.83 | 0.32 | 0.63 | |
| Alkaline Phosphatase | U/l | 127 | 108 | 146 | 9.50 | 19.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 283 | 240 | 326 | 21.50 | 43.00 | Diethanolamine buffer DEA 37°C |
| | U/l | 220 | 187 | 253 | 16.50 | 33.00 | Diethanolamine buffer DEA 30°C |
| | U/l | 181 | 153 | 209 | 14.00 | 28.00 | Diethanolamine buffer DEA 25°C |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Alkaline Phosphatase | U/l | 171 | 145 | 197 | 13.00 | 26.00 | AMP optimised to IFCC 37°C |
| | U/l | 133 | 113 | 153 | 10.00 | 20.00 | AMP optimised to IFCC 30°C |
| | U/l | 109 | 93 | 125 | 8.00 | 16.00 | AMP optimised to IFCC 25°C |
| | U/l | 165 | 140 | 190 | 12.50 | 25.00 | AMP non-optimised 37°C |
| | U/l | 129 | 109 | 149 | 10.00 | 20.00 | AMP non-optimised 30°C |
| | U/l | 105 | 89 | 121 | 8.00 | 16.00 | AMP non-optimised 25°C |
| ALT (GPT) | U/l | 48 | 38 | 58 | 5.00 | 10.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 38 | 30 | 46 | 4.00 | 8.00 | Tris buffer with P5P 37°C |
| | U/l | 28 | 22 | 34 | 3.00 | 6.00 | Tris buffer with P5P 30°C |
| | U/l | 21 | 17 | 25 | 2.00 | 4.00 | Tris buffer with P5P 25°C |
| | U/l | 34 | 27 | 41 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 25 | 20 | 30 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| | U/l | 34 | 27 | 41 | 3.50 | 7.00 | Tris buffer SCE 37°C |
| | U/l | 25 | 20 | 30 | 2.50 | 5.00 | Tris buffer SCE 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer SCE 25°C |
| Amylase Pancreatic | U/l | 68 | 58 | 78 | 5.00 | 10.00 | Immunoinhibition EPS substrate 37°C |
| | U/l | 67 | 57 | 77 | 5.00 | 10.00 | Roche liquid stable pNPG7 37°C |
| | U/l | 79 | 67 | 91 | 6.00 | 12.00 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 88 | 75 | 101 | 6.50 | 13.00 | pNP Maltotrioside substrates 37°C |
| | U/l | 91 | 78 | 104 | 6.50 | 13.00 | Siemens - blocked pNPG7 37°C |
| | U/l | 87 | 74 | 100 | 6.50 | 13.00 | Biotrol - blocked pNPG7 37°C |
| | U/l | 74 | 63 | 85 | 5.50 | 11.00 | Randox Lyo. Ethylidene pNPG7 37°C |
| | U/l | 99 | 85 | 113 | 7.00 | 14.00 | Randox Liquid Ethylidene pNPG7 37°C |
| | U/l | 86 | 73 | 99 | 6.50 | 13.00 | Beckman Synchron CX4/CX5/CX7 37°C |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Amylase Total | U/l | 100 | 85 | 115 | 7.50 | 15.00 | Siemens - maltopenta/hexaoside 37°C |
| | U/l | 87 | 74 | 100 | 6.50 | 13.00 | Saccharogenic 37°C |
| | U/l | 90 | 77 | 103 | 6.50 | 13.00 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 66 | 56 | 76 | 5.00 | 10.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 88 | 74 | 102 | 7.00 | 14.00 | Other Roche 2-chloro-pNPG7 37°C |
| | U/l | 89 | 76 | 102 | 6.50 | 13.00 | Roche liquid stable pNPG7 37°C |
| | U/l | 101 | 85 | 117 | 8.00 | 16.00 | Siemens 2-chloro-pNPG3 37°C |
| | U/l | 92 | 78 | 106 | 7.00 | 14.00 | Beckman Coulter - blocked pNPG7 37°C |
| | U/l | 96 | 82 | 110 | 7.00 | 14.00 | Beckman Synchron AMY7 37°C |
| | U/l | 91 | 78 | 104 | 6.50 | 13.00 | I.L. 2-chloro-pNPG3 37°C |
| | U/l | 99 | 84 | 114 | 7.50 | 15.00 | Abbott Architect Non-IFCC Cal. 37°C |
| | U/l | 108 | 91 | 125 | 8.50 | 17.00 | Abbott Architect IFCC Cal. 37°C |
| Apolipoprotein A-1 | g/l | 1.16 | 0.95 | 1.37 | 0.10 | 0.21 | Immunoturbidimetric |
| | mg/dl | 116 | 95.1 | 137 | 10.45 | 20.90 | |
| Apolipoprotein B | g/l | 0.64 | 0.53 | 0.76 | 0.06 | 0.12 | Immunoturbidimetric |
| | mg/dl | 64.4 | 52.8 | 76.0 | 5.80 | 11.60 | |
| AST (GOT) | U/l | 54 | 43 | 65 | 5.50 | 11.00 | Ortho Vitros Microslide visible slide 37°C |
| | U/l | 49 | 39 | 59 | 5.00 | 10.00 | Tris buffer with P5P 37°C |
| | U/l | 33 | 26 | 40 | 3.50 | 7.00 | Tris buffer with P5P 30°C |
| | U/l | 23 | 19 | 27 | 2.00 | 4.00 | Tris buffer with P5P 25°C |
| | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer without P5P 30°C |
| | U/l | 17 | 14 | 20 | 1.50 | 3.00 | Tris buffer without P5P 25°C |
| | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer SCE 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer SCE 30°C |
| | U/l | 17 | 14 | 20 | 1.50 | 3.00 | Tris buffer SCE 25°C |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bicarbonate | mmol/l | 15.0 | 11.9 | 18.1 | 1.55 | 3.10 | Colorimetric |
| | mmol/l | 14.4 | 11.5 | 17.3 | 1.45 | 2.90 | Differential rate pH change |
| | mmol/l | 15.0 | 11.9 | 18.1 | 1.55 | 3.10 | Enzymatic |
| | mmol/l | 16.0 | 12.6 | 19.4 | 1.70 | 3.40 | Ion selective electrode |
| Bile Acids | µmol/l | 25.1 | 20.1 | 30.1 | 2.50 | 5.00 | 4th Generation Colorimetric |
| | µmol/l | 23.6 | 18.9 | 28.3 | 2.35 | 4.70 | 5th Generation Colorimetric |
| Bilirubin Direct | µmol/l | 18.8 | 14.8 | 22.8 | 2.00 | 4.00 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.10 | 0.866 | 1.33 | 0.12 | 0.23 | |
| | µmol/l | 20.7 | 16.4 | 25.0 | 2.15 | 4.30 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.21 | 0.959 | 1.46 | 0.13 | 0.25 | |
| | µmol/l | 14.6 | 11.5 | 17.7 | 1.55 | 3.10 | Vitros Total Bil - BU |
| | mg/dl | 0.854 | 0.673 | 1.04 | 0.09 | 0.18 | |
| | µmol/l | 18.4 | 14.6 | 22.2 | 1.90 | 3.80 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.08 | 0.854 | 1.31 | 0.11 | 0.23 | |
| | µmol/l | 16.1 | 12.7 | 19.5 | 1.70 | 3.40 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 0.942 | 0.743 | 1.14 | 0.10 | 0.20 | |
| | µmol/l | 15.1 | 11.9 | 18.3 | 1.60 | 3.20 | Modified Jendrassik |
| | mg/dl | 0.883 | 0.696 | 1.07 | 0.09 | 0.19 | |
| Bilirubin Total | µmol/l | 25.8 | 20.4 | 31.2 | 2.70 | 5.40 | Vitros 250/500/700/950 Total Bilirubin |
| | mg/dl | 1.51 | 1.19 | 1.83 | 0.16 | 0.32 | |
| | µmol/l | 23.4 | 18.5 | 28.3 | 2.45 | 4.90 | Vitros 250/500/700/950 Total BUBC |
| | mg/dl | 1.37 | 1.08 | 1.66 | 0.15 | 0.29 | |
| | µmol/l | 32.0 | 25.3 | 38.7 | 3.35 | 6.70 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.87 | 1.48 | 2.26 | 0.20 | 0.39 | |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 27.6 | 21.8 | 33.4 | 2.90 | 5.80 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.61 | 1.28 | 1.94 | 0.17 | 0.33 | |
| | µmol/l | 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 | 23.5 | 18.6 | 28.4 | 2.45 | 4.90 | Nitrobenzenediazonium salt |
| | mg/dl | 1.37 | 1.09 | 1.65 | 0.14 | 0.28 | |
| | µmol/l | 25.0 | 19.7 | 30.3 | 2.65 | 5.30 | Diazonium ion |
| | mg/dl | 1.46 | 1.15 | 1.77 | 0.16 | 0.31 | |
| | µmol/l | 27.3 | 21.6 | 33.0 | 2.85 | 5.70 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.60 | 1.26 | 1.94 | 0.17 | 0.34 | |
| | µmol/l | 32.8 | 25.9 | 39.7 | 3.45 | 6.90 | Modified Jendrassik |
| | mg/dl | 1.92 | 1.52 | 2.32 | 0.20 | 0.40 | |
| Calcium | mmol/l | 2.13 | 1.92 | 2.34 | 0.11 | 0.21 | Cresolphthalein complexone |
| | mg/dl | 8.54 | 7.70 | 9.38 | 0.42 | 0.84 | |
| | mmol/l | 2.18 | 1.96 | 2.40 | 0.11 | 0.22 | Ortho Vitros Microslide Systems |
| | mg/dl | 8.74 | 7.86 | 9.62 | 0.44 | 0.88 | |
| | mmol/l | 2.12 | 1.91 | 2.33 | 0.11 | 0.21 | Ion selective electrode |
| | mg/dl | 8.50 | 7.66 | 9.34 | 0.42 | 0.84 | |
| | mmol/l | 2.35 | 2.11 | 2.59 | 0.12 | 0.24 | Methylthymol blue |
| | mg/dl | 9.42 | 8.46 | 10.4 | 0.48 | 0.96 | |
| | mmol/l | 2.17 | 1.95 | 2.39 | 0.11 | 0.22 | Arsenazo III |
| | mg/dl | 8.70 | 7.82 | 9.58 | 0.44 | 0.88 | |
| | mmol/l | 2.16 | 1.94 | 2.38 | 0.11 | 0.22 | NM-BAPTA |
| | mg/dl | 8.66 | 7.78 | 9.54 | 0.44 | 0.88 | |
| Chloride | mmol/l | 99.5 | 91.5 | 108 | 4.00 | 8.00 | Colorimetric |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Chloride | mmol/l | 98.8 | 90.9 | 107 | 3.95 | 7.90 | Ortho Vitros Microslide Systems |
| | mmol/l | 97.1 | 89.3 | 105 | 3.90 | 7.80 | ISE indirect |
| | mmol/l | 99.5 | 91.5 | 108 | 4.00 | 8.00 | ISE direct |
| Cholesterol | mmol/l | 3.96 | 3.45 | 4.47 | 0.26 | 0.51 | Ortho Vitros Microslide Systems |
| | mg/dl | 153 | 133 | 173 | 10.00 | 20.00 | |
| | mmol/l | 4.10 | 3.57 | 4.63 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 158 | 138 | 178 | 10.00 | 20.00 | |
| Cholinesterase | U/l | 5472 | 4378 | 6566 | 547.00 | 1094.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 196 | 161 | 231 | 17.50 | 35.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 216 | 177 | 255 | 19.50 | 39.00 | CK-NAC serum start (DGKC) 37°C |
| | U/l | 135 | 111 | 159 | 12.00 | 24.00 | CK-NAC serum start (DGKC) 30°C |
| | U/l | 92 | 75 | 109 | 8.50 | 17.00 | CK-NAC serum start (DGKC) 25°C |
| | U/l | 207 | 170 | 244 | 18.50 | 37.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 130 | 106 | 154 | 12.00 | 24.00 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 88 | 72 | 104 | 8.00 | 16.00 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 208 | 170 | 246 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| | U/l | 130 | 106 | 154 | 12.00 | 24.00 | CK-NAC (IFCC) 30°C |
| | U/l | 88 | 72 | 104 | 8.00 | 16.00 | CK-NAC (IFCC) 25°C |
| | U/l | 211 | 173 | 249 | 19.00 | 38.00 | Monothioglycerol 37°C |
| | U/l | 132 | 108 | 156 | 12.00 | 24.00 | Monothioglycerol 30°C |
| | U/l | 90 | 74 | 106 | 8.00 | 16.00 | Monothioglycerol 25°C |
| | U/l | 203 | 166 | 240 | 18.50 | 37.00 | Dithioerythritol 37°C |
| | U/l | 127 | 104 | 150 | 11.50 | 23.00 | Dithioerythritol 30°C |
| | U/l | 86 | 71 | 101 | 7.50 | 15.00 | Dithioerythritol 25°C |
| | U/l | 190 | 156 | 224 | 17.00 | 34.00 | Dithioerythritol (DTE) IFCC correlated 37°C |
| | U/l | 119 | 98 | 140 | 10.50 | 21.00 | Dithioerythritol (DTE) IFCC correlated 30°C |
| | U/l | 81 | 66 | 96 | 7.50 | 15.00 | Dithioerythritol (DTE) IFCC correlated 25°C |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Copper | µmol/l | 18.1 | 14.5 | 21.7 | 1.80 | 3.60 | Atomic absorption |
| | µg/dl | 115 | 92.2 | 138 | 11.40 | 22.80 | |
| | µmol/l | 18.8 | 15.0 | 22.6 | 1.90 | 3.80 | Colorimetric |
| | µg/dl | 120 | 95.4 | 145 | 12.30 | 24.60 | |
| Cortisol | nmol/l | 502 | 377 | 627 | 62.50 | 125.00 | Roche Cobas E411 |
| | µg/dl | 18.1 | 13.6 | 22.6 | 2.25 | 4.50 | |
| Creatinine | µmol/l | 132 | 105 | 159 | 13.50 | 27.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.49 | 1.19 | 1.79 | 0.15 | 0.30 | |
| | µmol/l | 130 | 104 | 156 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.47 | 1.18 | 1.76 | 0.15 | 0.29 | |
| | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Creatinine PAP method |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 133 | 107 | 159 | 13.00 | 26.00 | Roche Creatinine Plus |
| | mg/dl | 1.50 | 1.21 | 1.79 | 0.15 | 0.29 | |
| | µmol/l | 132 | 106 | 158 | 13.00 | 26.00 | Jaffe rate blanked |
| | mg/dl | 1.49 | 1.20 | 1.78 | 0.15 | 0.29 | |
| | µmol/l | 131 | 105 | 157 | 13.00 | 26.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 1.48 | 1.19 | 1.77 | 0.15 | 0.29 | |
| | µmol/l | 127 | 101 | 153 | 13.00 | 26.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 1.44 | 1.14 | 1.74 | 0.15 | 0.30 | |
| | µmol/l | 127 | 101 | 153 | 13.00 | 26.00 | Vitros IDMS Traceable |
| | mg/dl | 1.44 | 1.14 | 1.74 | 0.15 | 0.30 | |
| | µmol/l | 130 | 104 | 156 | 13.00 | 26.00 | IDMS traceable |
| | mg/dl | 1.47 | 1.18 | 1.76 | 0.15 | 0.29 | |



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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| D-3-Hydroxybutyrate | mmol/l | 0.28 | 0.24 | 0.33 | 0.02 | 0.04 | Tris buffer 100mmol pH 8.5 |
| Digoxin | nmol/l | 1.90 | 1.52 | 2.28 | 0.19 | 0.38 | Immunoturbidimetric |
| | ng/ml | 1.48 | 1.19 | 1.77 | 0.15 | 0.29 | |
| Folate | nmol/l | 43.3 | 32.9 | 53.7 | 5.20 | 10.40 | Roche Cobas E411 |
| | ng/ml | 19.1 | 14.5 | 23.7 | 2.30 | 4.60 | |
| Free T4 | pmol/l | 18.1 | 13.6 | 22.6 | 2.25 | 4.50 | Abbott Architect |
| | ng/dl | 1.41 | 1.06 | 1.76 | 0.18 | 0.35 | |
| | pg/ml | 14.1 | 10.6 | 17.6 | 1.75 | 3.50 | Abbott Architect |
| | pmol/l | 18.8 | 14.1 | 23.5 | 2.35 | 4.70 | Siemens Centaur XP/XPT/Classic |
| | ng/dl | 1.47 | 1.10 | 1.84 | 0.19 | 0.37 | |
| | pg/ml | 14.7 | 11.0 | 18.4 | 1.85 | 3.70 | Siemens Centaur XP/XPT/Classic |
| | pmol/l | 21.6 | 16.2 | 27.0 | 2.70 | 5.40 | Beckman Access |
| | ng/dl | 1.68 | 1.26 | 2.10 | 0.21 | 0.42 | |
| | pg/ml | 16.8 | 12.6 | 21.0 | 2.10 | 4.20 | Beckman Access |
| | pmol/l | 20.5 | 15.4 | 25.6 | 2.55 | 5.10 | Beckman DxI800 |
| | ng/dl | 1.60 | 1.20 | 2.00 | 0.20 | 0.40 | |
| | pg/ml | 16.0 | 12.0 | 20.0 | 2.00 | 4.00 | Beckman DxI800 |
| | pmol/l | 20.3 | 15.2 | 25.4 | 2.55 | 5.10 | Siemens Immulite 2000/2500 |
| | ng/dl | 1.58 | 1.19 | 1.97 | 0.20 | 0.39 | |
| | pg/ml | 15.8 | 11.9 | 19.7 | 1.95 | 3.90 | Siemens Immulite 2000/2500 |
| | pmol/l | 36.6 | 27.5 | 45.7 | 4.55 | 9.10 | Vitros ECi |
| | ng/dl | 2.85 | 2.15 | 3.55 | 0.35 | 0.70 | |
| | pg/ml | 28.5 | 21.5 | 35.5 | 3.50 | 7.00 | Vitros ECi |
| | pmol/l | 24.0 | 18.0 | 30.0 | 3.00 | 6.00 | Roche Elecsys |
| | ng/dl | 1.87 | 1.40 | 2.34 | 0.24 | 0.47 | |
| | pg/ml | 18.7 | 14.0 | 23.4 | 2.35 | 4.70 | Roche Elecsys |



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**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Free T4 | pmol/l | 23.9 | 17.9 | 29.9 | 3.00 | 6.00 | Roche Modular E170 |
| | ng/dl | 1.86 | 1.40 | 2.32 | 0.23 | 0.46 | |
| | pg/ml | 18.6 | 14.0 | 23.2 | 2.30 | 4.60 | Roche Modular E170 |
| | pmol/l | 24.0 | 18.0 | 30.0 | 3.00 | 6.00 | Roche Cobas E411 |
| | ng/dl | 1.87 | 1.40 | 2.34 | 0.24 | 0.47 | |
| | pg/ml | 18.7 | 14.0 | 23.4 | 2.35 | 4.70 | Roche Cobas E411 |
| | pmol/l | 24.1 | 18.1 | 30.1 | 3.00 | 6.00 | Roche Cobas 6000/8000 |
| | ng/dl | 1.88 | 1.41 | 2.35 | 0.24 | 0.47 | |
| | pg/ml | 18.8 | 14.1 | 23.5 | 2.35 | 4.70 | Roche Cobas 6000/8000 |
| | pmol/l | 22.5 | 16.9 | 28.1 | 2.80 | 5.60 | Biomerieux Vidas FT4N Kit |
| | ng/dl | 1.76 | 1.32 | 2.20 | 0.22 | 0.44 | |
| | pg/ml | 17.6 | 13.2 | 22.0 | 2.20 | 4.40 | Biomerieux Vidas FT4N Kit |
| Gentamicin | µmol/l | 7.99 | 6.39 | 9.59 | 0.80 | 1.60 | Immunoturbidimetric |
| | µg/ml | 3.82 | 3.05 | 4.59 | 0.39 | 0.77 | |
| gamma-GT | U/l | 49 | 42 | 56 | 3.50 | 7.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 39 | 33 | 45 | 3.00 | 6.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 30 | 26 | 34 | 2.00 | 4.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 65 | 55 | 75 | 5.00 | 10.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 43 | 37 | 49 | 3.00 | 6.00 | Gamma glutamyl-4-nitroanilide 37°C |
| | U/l | 34 | 29 | 39 | 2.50 | 5.00 | Gamma glutamyl-4-nitroanilide 30°C |
| | U/l | 27 | 23 | 31 | 2.00 | 4.00 | Gamma glutamyl-4-nitroanilide 25°C |
| | U/l | 52 | 44 | 60 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 41 | 35 | 47 | 3.00 | 6.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 32 | 27 | 37 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |



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**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 59 | 50 | 68 | 4.50 | 9.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 46 | 39 | 53 | 3.50 | 7.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 36 | 31 | 41 | 2.50 | 5.00 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| GLDH | U/l | 15 | 12 | 18 | 1.50 | 3.00 | Triethanolamine buffer 50 mmol 37°C |
| | U/l | 12 | 9 | 15 | 1.50 | 3.00 | Triethanolamine buffer 50 mmol 30°C |
| | U/l | 9 | 7 | 11 | 1.00 | 2.00 | Triethanolamine buffer 50 mmol 25°C |
| Glucose | mmol/l | 5.98 | 5.08 | 6.88 | 0.45 | 0.90 | Ortho Vitros Microslide Systems |
| | mg/dl | 108 | 91.5 | 125 | 8.25 | 16.50 | |
| | mmol/l | 6.10 | 5.19 | 7.01 | 0.46 | 0.91 | Glucose dehydrogenase |
| | mg/dl | 110 | 93.5 | 127 | 8.25 | 16.50 | |
| | mmol/l | 6.12 | 5.20 | 7.04 | 0.46 | 0.92 | Hexokinase |
| | mg/dl | 110 | 93.7 | 126 | 8.15 | 16.30 | |
| | mmol/l | 6.05 | 5.15 | 6.95 | 0.45 | 0.90 | Oxygen electrode |
| | mg/dl | 109 | 92.8 | 125 | 8.10 | 16.20 | |
| | mmol/l | 6.16 | 5.24 | 7.08 | 0.46 | 0.92 | Glucose oxidase |
| | mg/dl | 111 | 94.4 | 128 | 8.30 | 16.60 | |
| HDL - Cholesterol | mmol/l | 1.48 | 1.26 | 1.70 | 0.11 | 0.22 | Direct HDL PPD |
| | mg/dl | 57.1 | 48.6 | 65.6 | 4.25 | 8.50 | |
| | mmol/l | 1.35 | 1.15 | 1.55 | 0.10 | 0.20 | Direct HDL Immunoseparation |
| | mg/dl | 52.1 | 44.4 | 59.8 | 3.85 | 7.70 | |
| | mmol/l | 1.72 | 1.46 | 1.98 | 0.13 | 0.26 | Direct HDL PEGME |
| | mg/dl | 66.4 | 56.4 | 76.4 | 5.00 | 10.00 | |
| | mmol/l | 1.16 | 0.99 | 1.33 | 0.09 | 0.17 | Direct Clearance Method |
| | mg/dl | 44.8 | 38.1 | 51.5 | 3.35 | 6.70 | |



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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| HDL - Cholesterol | mmol/l | 1.51 | 1.28 | 1.74 | 0.12 | 0.23 | Vitros 5.1 FS microtip assay |
| | mg/dl | 58.3 | 49.4 | 67.2 | 4.45 | 8.90 | |
| | mmol/l | 1.56 | 1.33 | 1.79 | 0.12 | 0.23 | Vitros dHDL PTA/MgCl2 direct precipitation |
| | mg/dl | 60.2 | 51.3 | 69.1 | 4.45 | 8.90 | |
| | mmol/l | 1.66 | 1.41 | 1.91 | 0.13 | 0.25 | Direct HDL Roche 3rd generation |
| | mg/dl | 64.1 | 54.4 | 73.8 | 4.85 | 9.70 | |
| | mmol/l | 1.35 | 1.15 | 1.55 | 0.10 | 0.20 | HDL - Ultra |
| | mg/dl | 52.1 | 44.4 | 59.8 | 3.85 | 7.70 | |
| Immunoglobulin A | g/l | 1.66 | 1.25 | 2.07 | 0.21 | 0.41 | Immunoturbidimetric |
| | mg/dl | 166 | 125 | 207 | 20.50 | 41.00 | |
| Immunoglobulin G | g/l | 6.26 | 5.13 | 7.39 | 0.57 | 1.13 | Immunoturbidimetric |
| | mg/dl | 626 | 513 | 739 | 56.50 | 113.00 | |
| Immunoglobulin M | g/l | 0.77 | 0.62 | 0.92 | 0.08 | 0.15 | Immunoturbidimetric |
| | mg/dl | 76.9 | 61.5 | 92.3 | 7.70 | 15.40 | |
| Iron | µmol/l | 18.5 | 15.2 | 21.8 | 1.65 | 3.30 | Colorimetric with ppt. |
| | µg/dl | 103 | 85.0 | 121 | 9.00 | 18.00 | |
| | µmol/l | 18.5 | 15.1 | 21.9 | 1.70 | 3.40 | Colorimetric without ppt. |
| | µg/dl | 103 | 84.4 | 122 | 9.30 | 18.60 | |
| | µmol/l | 19.4 | 15.9 | 22.9 | 1.75 | 3.50 | Ortho Vitros Microslide Systems |
| | µg/dl | 108 | 88.9 | 127 | 9.55 | 19.10 | |
| Lactate | mmol/l | 1.45 | 1.19 | 1.71 | 0.13 | 0.26 | Colorimetric Lactate Oxidase |
| | mg/dl | 13.1 | 10.7 | 15.5 | 1.20 | 2.40 | |
| | mmol/l | 1.36 | 1.12 | 1.60 | 0.12 | 0.24 | Ortho Vitros Microslide Systems |
| | mg/dl | 12.3 | 10.1 | 14.5 | 1.10 | 2.20 | |
| | mmol/l | 1.51 | 1.23 | 1.79 | 0.14 | 0.28 | UV LDH |
| | mg/dl | 13.6 | 11.1 | 16.1 | 1.25 | 2.50 | |



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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| LAP | U/l | 16 | 14 | 18 | 1.00 | 2.00 | NAGEL 37°C |
| LD (LDH) | U/l | 555 | 472 | 638 | 41.50 | 83.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 173 | 147 | 199 | 13.00 | 26.00 | L->P 37°C |
| | U/l | 125 | 106 | 144 | 9.50 | 19.00 | L->P 30°C |
| | U/l | 88 | 75 | 101 | 6.50 | 13.00 | L->P 25°C |
| | U/l | 409 | 348 | 470 | 30.50 | 61.00 | P->L Scandinavian & Dutch 37°C |
| | U/l | 295 | 251 | 339 | 22.00 | 44.00 | P->L Scandinavian & Dutch 30°C |
| | U/l | 207 | 176 | 238 | 15.50 | 31.00 | P->L Scandinavian & Dutch 25°C |
| | U/l | 375 | 319 | 431 | 28.00 | 56.00 | P->L German methods 37°C |
| | U/l | 271 | 230 | 312 | 20.50 | 41.00 | P->L German methods 30°C |
| | U/l | 190 | 162 | 218 | 14.00 | 28.00 | P->L German methods 25°C |
| | U/l | 391 | 332 | 450 | 29.50 | 59.00 | P->L SFBC 37°C |
| | U/l | 282 | 240 | 324 | 21.00 | 42.00 | P->L SFBC 30°C |
| | U/l | 198 | 168 | 228 | 15.00 | 30.00 | P->L SFBC 25°C |
| | U/l | 190 | 162 | 218 | 14.00 | 28.00 | L->P IFCC 37°C |
| | U/l | 137 | 117 | 157 | 10.00 | 20.00 | L->P IFCC 30°C |
| | U/l | 96 | 82 | 110 | 7.00 | 14.00 | L->P IFCC 25°C |
| Lipase | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Other Colorimetric 37°C |
| | U/l | 239 | 192 | 286 | 23.50 | 47.00 | Ortho Vitros Microslide Systems 37°C |
| | U/l | 32 | 26 | 38 | 3.00 | 6.00 | Roche Colorimetric 37°C |
| | U/l | 42 | 34 | 50 | 4.00 | 8.00 | Randox Colorimetric 37°C |
| | U/l | 180 | 144 | 216 | 18.00 | 36.00 | Randox Turbidimetric with colipase 37°C |
| Lithium | mmol/l | 1.31 | 1.15 | 1.47 | 0.08 | 0.16 | Ortho Vitros Microslide Systems |
| | mg/dl | 0.910 | 0.799 | 1.02 | 0.06 | 0.11 | |



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**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Lithium | mmol/l | 1.06 | 0.93 | 1.19 | 0.07 | 0.13 | Ion selective electrode |
| | mg/dl | 0.736 | 0.646 | 0.826 | 0.05 | 0.09 | |
| | mmol/l | 1.06 | 0.94 | 1.19 | 0.06 | 0.13 | Spectrophotometric |
| | mg/dl | 0.736 | 0.649 | 0.823 | 0.04 | 0.09 | |
| | mmol/l | 1.02 | 0.90 | 1.14 | 0.06 | 0.12 | Randox Colorimetric |
| | mg/dl | 0.708 | 0.624 | 0.792 | 0.04 | 0.08 | |
| Magnesium | mmol/l | 0.92 | 0.81 | 1.03 | 0.06 | 0.11 | Arsenazo III |
| | mg/dl | 2.23 | 1.96 | 2.50 | 0.14 | 0.27 | |
| | mmol/l | 0.94 | 0.83 | 1.05 | 0.06 | 0.11 | Ortho Vitros Microslide Systems |
| | mg/dl | 2.28 | 2.00 | 2.56 | 0.14 | 0.28 | |
| | mmol/l | 0.92 | 0.81 | 1.04 | 0.06 | 0.11 | Calmagite |
| | mg/dl | 2.25 | 1.98 | 2.52 | 0.14 | 0.27 | |
| | mmol/l | 0.95 | 0.83 | 1.06 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.30 | 2.02 | 2.58 | 0.14 | 0.28 | |
| | mmol/l | 0.89 | 0.79 | 1.00 | 0.05 | 0.11 | Methylthymol blue |
| | mg/dl | 2.17 | 1.91 | 2.43 | 0.13 | 0.26 | |
| | mmol/l | 0.94 | 0.83 | 1.05 | 0.06 | 0.11 | Chlorphosphonazo III |
| | mg/dl | 2.28 | 2.00 | 2.56 | 0.14 | 0.28 | |
| | mmol/l | 0.90 | 0.79 | 1.01 | 0.05 | 0.11 | Enzymatic |
| | mg/dl | 2.18 | 1.92 | 2.44 | 0.13 | 0.26 | |
| NEFA | mmol/l | 2.41 | 2.05 | 2.77 | 0.18 | 0.36 | Colorimetric |
| Osmolality | mOsm/kg | 293 | 234 | 352 | 29.50 | 59.00 | Calculated |
| | mOsm/kg | 308 | 247 | 369 | 30.50 | 61.00 | Freezing point depression |
| | mOsm/kg | 314 | 251 | 377 | 31.50 | 63.00 | Vapour pressure |
| Paracetamol | mmol/l | 0.07 | 0.06 | 0.09 | 0.01 | 0.02 | Colorimetric |
| | mg/l | 11.0 | 8.78 | 13.2 | 1.11 | 2.22 | |



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**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Phosphate Inorganic | mmol/l | 1.52 | 1.29 | 1.75 | 0.12 | 0.23 | Ortho Vitros Microslide Systems |
| | mg/dl | 4.71 | 4.00 | 5.42 | 0.36 | 0.71 | |
| | mmol/l | 1.48 | 1.26 | 1.70 | 0.11 | 0.22 | Phosphomolybdate enzymatic |
| | mg/dl | 4.59 | 3.91 | 5.27 | 0.34 | 0.68 | |
| | mmol/l | 1.47 | 1.25 | 1.69 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.56 | 3.88 | 5.24 | 0.34 | 0.68 | |
| Potassium | mmol/l | 4.18 | 3.85 | 4.51 | 0.17 | 0.33 | Ortho Vitros Microslide Systems |
| | mmol/l | 4.05 | 3.73 | 4.37 | 0.16 | 0.32 | Enzymatic |
| | mmol/l | 4.06 | 3.74 | 4.38 | 0.16 | 0.32 | ISE method - direct |
| | mmol/l | 4.11 | 3.78 | 4.44 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 60.3 | 48.2 | 72.4 | 6.05 | 12.10 | Ortho Vitros Microslide Systems |
| | g/dl | 6.03 | 4.82 | 7.24 | 0.61 | 1.21 | |
| | g/l | 59.9 | 47.9 | 71.9 | 6.00 | 12.00 | Biuret reaction end point |
| | g/dl | 5.99 | 4.79 | 7.19 | 0.60 | 1.20 | |
| | g/l | 58.8 | 47.0 | 70.6 | 5.90 | 11.80 | Biuret reaction kinetic |
| | g/dl | 5.88 | 4.70 | 7.06 | 0.59 | 1.18 | |
| PSA Total | ng/ml = | 14.5 | 10.8 | 18.2 | 1.85 | 3.70 | Roche Elecsys Modular E170 |
| | ng/ml = | 14.7 | 11.1 | 18.3 | 1.80 | 3.60 | bioMerieux VIDAS TPSA |
| | ng/ml = | 11.4 | 8.53 | 14.3 | 1.44 | 2.87 | Siemens Centaur XP/XPT/Classic |
| | ng/ml = | 12.0 | 8.97 | 15.0 | 1.52 | 3.03 | Abbott Architect |
| | ng/ml = | 14.7 | 11.0 | 18.4 | 1.85 | 3.70 | Cobas E411 |
| | ng/ml = | 14.0 | 10.5 | 17.5 | 1.75 | 3.50 | Roche Cobas 6000/8000 |
| Salicylate | mmol/l | 0.39 | 0.31 | 0.47 | 0.04 | 0.08 | Enzymatic |
| | mg/dl | 5.40 | 4.32 | 6.48 | 0.54 | 1.08 | |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Sodium | mmol/l | 145 | 138 | 152 | 3.50 | 7.00 | Ortho Vitros Microslide Systems |
| | mmol/l | 143 | 136 | 150 | 3.50 | 7.00 | Enzymatic |
| | mmol/l | 142 | 135 | 149 | 3.50 | 7.00 | ISE method - direct |
| | mmol/l | 144 | 137 | 151 | 3.50 | 7.00 | ISE method - indirect |
| Theophylline | µmol/l | 30.2 | 24.2 | 36.2 | 3.00 | 6.00 | Immunoturbidimetric |
| | µg/ml | 5.44 | 4.36 | 6.52 | 0.54 | 1.08 | |
| Thyroid Stimulating Hormone | µU/ml = | 1.14 | 0.91 | 1.37 | 0.12 | 0.23 | Abbott Architect |
| | µU/ml = | 1.23 | 0.99 | 1.47 | 0.12 | 0.24 | Beckman Access hyperTSH 3rd Generation |
| | µU/ml = | 1.44 | 1.15 | 1.73 | 0.15 | 0.29 | bioMerieux VIDAS TSH |
| | µU/ml = | 1.25 | 1.00 | 1.50 | 0.13 | 0.25 | Vitros ECi |
| | µU/ml = | 1.49 | 1.19 | 1.79 | 0.15 | 0.30 | Roche Elecsys |
| | µU/ml = | 1.46 | 1.17 | 1.75 | 0.15 | 0.29 | Roche Modular E170 |
| | µU/ml = | 1.46 | 1.17 | 1.75 | 0.15 | 0.29 | Roche Cobas E411 |
| | µU/ml = | 1.45 | 1.16 | 1.74 | 0.15 | 0.29 | Roche Cobas 6000/8000 |
| | µU/ml = | 1.24 | 0.99 | 1.49 | 0.13 | 0.25 | Beckman DxI800 Hyper TSH |
| | µU/ml = | 1.28 | 1.02 | 1.54 | 0.13 | 0.26 | Siemens Centaur XP/XPT/Classic TSH3-Ultra |
| TIBC | µmol/l | 53.9 | 42.6 | 65.2 | 5.65 | 11.30 | Ortho Vitros Microslide Systems |
| | µg/dl | 301 | 238 | 364 | 31.50 | 63.00 | |
| | µmol/l | 44.8 | 35.4 | 54.2 | 4.70 | 9.40 | Removal of excess free iron |
| | µg/dl | 250 | 198 | 302 | 26.00 | 52.00 | |
| | 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 | 49.9 | 39.4 | 60.4 | 5.25 | 10.50 | Direct Colorimetric |
| | µg/dl | 279 | 220 | 338 | 29.50 | 59.00 | |
| | µmol/l | 45.7 | 36.1 | 55.3 | 4.80 | 9.60 | Calculated from Transferrin |
| | µg/dl | 255 | 202 | 308 | 26.50 | 53.00 | |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| TIBC | µmol/l | 54.6 | 43.1 | 66.1 | 5.75 | 11.50 | Randox Direct |
| | µg/dl | 305 | 241 | 369 | 32.00 | 64.00 | |
| Tobramycin | µmol/l | 5.30 | 4.24 | 6.36 | 0.53 | 1.06 | Immunoturbidimetric |
| | µg/ml | 2.48 | 1.98 | 2.98 | 0.25 | 0.50 | |
| Total T3 | nmol/l | 2.01 | 1.50 | 2.52 | 0.26 | 0.51 | Abbott Architect |
| | ng/ml | 1.31 | 0.977 | 1.64 | 0.17 | 0.33 | |
| | ng/dl | 131 | 97.7 | 164 | 16.65 | 33.30 | Abbott Architect |
| | nmol/l | 2.34 | 1.75 | 2.93 | 0.30 | 0.59 | Siemens Centaur XP/XPT/Classic |
| | ng/ml | 1.52 | 1.14 | 1.90 | 0.19 | 0.38 | |
| | ng/dl | 152 | 114 | 190 | 19.00 | 38.00 | Siemens Centaur XP/XPT/Classic |
| | nmol/l | 2.39 | 1.79 | 2.99 | 0.30 | 0.60 | Roche Cobas 6000/8000 |
| | ng/ml | 1.56 | 1.17 | 1.95 | 0.20 | 0.39 | |
| | ng/dl | 156 | 117 | 195 | 19.50 | 39.00 | Roche Cobas 6000/8000 |
| Total T4 | nmol/l | 90.4 | 67.8 | 113 | 11.30 | 22.60 | Abbott Architect |
| | µg/dl | 7.05 | 5.29 | 8.81 | 0.88 | 1.76 | |
| | ng/ml | 70.5 | 52.9 | 88.1 | 8.80 | 17.60 | Abbott Architect |
| | nmol/l | 94.0 | 70.5 | 118 | 11.75 | 23.50 | Siemens Centaur XP/XPT/Classic |
| | µg/dl | 7.33 | 5.50 | 9.16 | 0.92 | 1.83 | |
| | ng/ml | 73.3 | 55.0 | 91.6 | 9.15 | 18.30 | Siemens Centaur XP/XPT/Classic |
| | nmol/l | 88.5 | 66.4 | 111 | 11.05 | 22.10 | BioMerieux Vidas |
| | µg/dl | 6.90 | 5.18 | 8.62 | 0.86 | 1.72 | |
| | ng/ml | 69.0 | 51.8 | 86.2 | 8.60 | 17.20 | BioMerieux Vidas |
| | nmol/l | 90.5 | 67.9 | 113 | 11.30 | 22.60 | Siemens Immulite 2000/2500 |
| | µg/dl | 7.06 | 5.30 | 8.82 | 0.88 | 1.76 | |
| | ng/ml | 70.6 | 53.0 | 88.2 | 8.80 | 17.60 | Siemens Immulite 2000/2500 |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Total T4 | nmol/l | 92.1 | 69.1 | 115 | 11.50 | 23.00 | Roche Cobas E411 |
| | µg/dl | 7.18 | 5.39 | 8.97 | 0.90 | 1.79 | |
| | ng/ml | 71.8 | 53.9 | 89.7 | 8.95 | 17.90 | Roche Cobas E411 |
| | nmol/l | 91.8 | 68.9 | 115 | 11.45 | 22.90 | Roche Cobas 6000/8000 |
| | µg/dl | 7.16 | 5.37 | 8.95 | 0.90 | 1.79 | |
| | ng/ml | 71.6 | 53.7 | 89.5 | 8.95 | 17.90 | Roche Cobas 6000/8000 |
| Transferrin | g/l | 1.80 | 1.44 | 2.16 | 0.18 | 0.36 | Immunoturbidimetric |
| | mg/dl | 180 | 144 | 216 | 18.00 | 36.00 | |
| Triglycerides | mmol/l | 1.11 | 0.93 | 1.29 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 98.2 | 82.3 | 114 | 7.95 | 15.90 | |
| | mmol/l | 1.09 | 0.91 | 1.27 | 0.09 | 0.18 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 96.5 | 80.9 | 112 | 7.80 | 15.60 | |
| | mmol/l | 1.12 | 0.94 | 1.30 | 0.09 | 0.18 | L/G Kinase EP. no correction |
| | mg/dl | 99.1 | 83.2 | 115 | 7.95 | 15.90 | |
| | mmol/l | 1.07 | 0.90 | 1.25 | 0.09 | 0.18 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 94.7 | 79.2 | 110 | 7.75 | 15.50 | |
| | mmol/l | 1.20 | 1.01 | 1.39 | 0.10 | 0.19 | Ortho Vitros Microslide Systems |
| | mg/dl | 106 | 89.4 | 123 | 8.30 | 16.60 | |
| UIBC | µmol/l | 28.0 | 23.0 | 33.0 | 2.50 | 5.00 | Direct Colorimetric |
| | µg/dl | 157 | 129 | 185 | 14.00 | 28.00 | |
| Urea | mmol/l | 6.66 | 5.66 | 7.66 | 0.50 | 1.00 | Ortho Vitros Microslide Systems |
| | mg/dl | 40.0 | 34.0 | 46.0 | 3.00 | 6.00 | |
| | mmol/l | 7.30 | 6.21 | 8.39 | 0.55 | 1.09 | Urease end point |
| | mg/dl | 43.9 | 37.3 | 50.5 | 3.30 | 6.60 | |



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## MEAN OF ALL INSTRUMENTS

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Urea | mmol/l | 7.17 | 6.09 | 8.25 | 0.54 | 1.08 | Urease kinetic |
| | mg/dl | 43.1 | 36.6 | 49.6 | 3.25 | 6.50 | |
| | mmol/l | 7.00 | 5.95 | 8.05 | 0.53 | 1.05 | Urease hypochlorite |
| | mg/dl | 42.1 | 35.8 | 48.4 | 3.15 | 6.30 | |
| | mmol/l | 7.17 | 6.09 | 8.25 | 0.54 | 1.08 | BUN |
| | mg/dl | 20.1 | 17.1 | 23.1 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.28 | 0.37 | 0.02 | 0.04 | Ortho Vitros Microslide Systems |
| | mg/dl | 5.49 | 4.77 | 6.21 | 0.36 | 0.72 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.66 | 4.92 | 6.40 | 0.37 | 0.74 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.63 | 4.89 | 6.37 | 0.37 | 0.74 | |
| | mmol/l | 0.33 | 0.29 | 0.38 | 0.02 | 0.04 | Spectrophotometric at 280-290 |
| | mg/dl | 5.61 | 4.87 | 6.35 | 0.37 | 0.74 | |
| | mmol/l | 0.33 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.59 | 4.87 | 6.31 | 0.36 | 0.72 | |
| Vitamin B12 | pmol/l | 474 | 379 | 569 | 47.50 | 95.00 | Roche Cobas E411 |
| | pg/ml | 642 | 514 | 770 | 64.00 | 128.00 | |
| Zinc | µmol/l | 35.9 | 28.7 | 43.1 | 3.60 | 7.20 | Atomic absorption |
| | µg/dl | 234 | 187 | 281 | 23.50 | 47.00 | |
| | µmol/l | 35.3 | 28.2 | 42.4 | 3.55 | 7.10 | Colorimetric with deproteinisation |
| | µg/dl | 231 | 184 | 278 | 23.50 | 47.00 | |



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## MEAN OF ALL INSTRUMENTS (Elec.)

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin (electrophoresis) | | 68.1 | 61.4 | 74.8 | 3.35 | 6.70 | % of total Protein (Beckman Capillary) |
| alpha-1-globulin | | 2.9 | 2.2 | 3.6 | 0.35 | 0.70 | % of total Protein (Beckman Capillary) |
| alpha-2-globulin | | 9.2 | 7.0 | 11.4 | 1.11 | 2.21 | % of total Protein (Beckman Capillary) |
| beta-globulin | | 10.3 | 7.8 | 12.8 | 1.24 | 2.47 | % of total Protein (Beckman Capillary) |
| gamma-globulin | | 9.5 | 7.2 | 11.8 | 1.14 | 2.28 | % of total Protein (Beckman Capillary) |



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## MINDRAY BS-200/300/400

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 41.9 | 35.6 | 48.2 | 3.15 | 6.30 | Bromocresol Green |
| | g/dl | 4.19 | 3.56 | 4.82 | 0.32 | 0.63 | |
| ALT (GPT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 27 | 21 | 33 | 3.00 | 6.00 | Tris buffer without P5P 30°C |
| | U/l | 20 | 16 | 24 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 37 | 30 | 44 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 25 | 20 | 30 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 18 | 14 | 22 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 17.7 | 14.0 | 21.4 | 1.85 | 3.70 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.04 | 0.819 | 1.26 | 0.11 | 0.22 | |
| Bilirubin Total | µmol/l | 26.0 | 20.5 | 31.5 | 2.75 | 5.50 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.52 | 1.20 | 1.84 | 0.16 | 0.32 | |
| Calcium | mmol/l | 2.16 | 1.95 | 2.37 | 0.11 | 0.21 | Arsenazo III |
| | mg/dl | 8.66 | 7.82 | 9.50 | 0.42 | 0.84 | |
| Cholesterol | mmol/l | 4.06 | 3.54 | 4.58 | 0.26 | 0.52 | Cholesterol Oxidase |
| | mg/dl | 157 | 137 | 177 | 10.00 | 20.00 | |
| CK Total | U/l | 209 | 171 | 247 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| | U/l | 131 | 107 | 155 | 12.00 | 24.00 | CK-NAC (IFCC) 30°C |
| | U/l | 89 | 73 | 105 | 8.00 | 16.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 128 | 103 | 153 | 12.50 | 25.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.45 | 1.16 | 1.74 | 0.15 | 0.29 | |



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## MINDRAY BS-200/300/400

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| gamma-GT | U/l | 52 | 44 | 60 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 41 | 35 | 47 | 3.00 | 6.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 32 | 27 | 37 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 6.25 | 5.31 | 7.19 | 0.47 | 0.94 | Glucose oxidase |
| | mg/dl | 113 | 95.7 | 130 | 8.65 | 17.30 | |
| Iron | µmol/l | 18.0 | 14.8 | 21.2 | 1.60 | 3.20 | Colorimetric without ppt. |
| | µg/dl | 101 | 82.7 | 119 | 9.15 | 18.30 | |
| LD (LDH) | U/l | 189 | 160 | 218 | 14.50 | 29.00 | L->P IFCC 37°C |
| | U/l | 136 | 116 | 156 | 10.00 | 20.00 | L->P IFCC 30°C |
| | U/l | 96 | 81 | 111 | 7.50 | 15.00 | L->P IFCC 25°C |
| Phosphate Inorganic | mmol/l | 1.46 | 1.24 | 1.68 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.53 | 3.84 | 5.22 | 0.35 | 0.69 | |
| Protein Total | g/l | 60.0 | 48.0 | 72.0 | 6.00 | 12.00 | Biuret reaction end point |
| | g/dl | 6.00 | 4.80 | 7.20 | 0.60 | 1.20 | |
| Triglycerides | mmol/l | 1.10 | 0.92 | 1.28 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 97.4 | 81.5 | 113 | 7.95 | 15.90 | |
| Urea | mmol/l | 7.50 | 6.37 | 8.63 | 0.57 | 1.13 | Urease end point |
| | mg/dl | 45.1 | 38.3 | 51.9 | 3.40 | 6.80 | |
| | mmol/l | 7.25 | 6.16 | 8.34 | 0.55 | 1.09 | Urease kinetic |
| | mg/dl | 43.6 | 37.0 | 50.2 | 3.30 | 6.60 | |
| | mmol/l | 7.25 | 6.16 | 8.34 | 0.55 | 1.09 | BUN |
| | mg/dl | 20.3 | 17.3 | 23.3 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.36 | 0.32 | 0.41 | 0.02 | 0.05 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 6.08 | 5.29 | 6.87 | 0.40 | 0.79 | |



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## MINDRAY BS-200/300/400

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.30 | 0.38 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.71 | 4.97 | 6.45 | 0.37 | 0.74 | |



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## PRESTIGE 24i

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 43.5 | 37.0 | 50.0 | 3.25 | 6.50 | Bromocresol Green |
| | g/dl | 4.35 | 3.70 | 5.00 | 0.33 | 0.65 | |
| AST (GOT) | U/l | 38 | 30 | 46 | 4.00 | 8.00 | Tris buffer without P5P 37°C |
| | U/l | 26 | 20 | 32 | 3.00 | 6.00 | Tris buffer without P5P 30°C |
| | U/l | 18 | 14 | 22 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Bilirubin Total | µmol/l | 23.1 | 18.2 | 28.0 | 2.45 | 4.90 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.35 | 1.06 | 1.64 | 0.15 | 0.29 | |
| Cholesterol | mmol/l | 4.11 | 3.57 | 4.65 | 0.27 | 0.54 | Cholesterol Oxidase |
| | mg/dl | 159 | 138 | 180 | 10.50 | 21.00 | |
| CK Total | U/l | 220 | 180 | 260 | 20.00 | 40.00 | CK-NAC (IFCC) 37°C |
| | U/l | 138 | 113 | 163 | 12.50 | 25.00 | CK-NAC (IFCC) 30°C |
| | U/l | 94 | 77 | 111 | 8.50 | 17.00 | CK-NAC (IFCC) 25°C |
| gamma-GT | U/l | 47 | 40 | 54 | 3.50 | 7.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 37 | 32 | 42 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 29 | 25 | 33 | 2.00 | 4.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 5.96 | 5.07 | 6.85 | 0.45 | 0.89 | Glucose oxidase |
| | mg/dl | 107 | 91.4 | 123 | 7.80 | 15.60 | |
| HDL - Cholesterol | mmol/l | 1.33 | 1.13 | 1.53 | 0.10 | 0.20 | Direct HDL Immunoseparation |
| | mg/dl | 51.3 | 43.6 | 59.0 | 3.85 | 7.70 | |
| Protein Total | g/l | 56.1 | 44.9 | 67.3 | 5.60 | 11.20 | Biuret reaction end point |
| | g/dl | 5.61 | 4.49 | 6.73 | 0.56 | 1.12 | |



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## PRESTIGE 24i

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 1.04 | 0.88 | 1.20 | 0.08 | 0.16 | Lipase/GPO-PAP no correction |
| | mg/dl | 92.0 | 77.6 | 106 | 7.20 | 14.40 | |
| Urea | mmol/l | 7.35 | 6.25 | 8.45 | 0.55 | 1.10 | Urease kinetic |
| | mg/dl | 44.2 | 37.6 | 50.8 | 3.30 | 6.60 | |
| | mmol/l | 7.35 | 6.25 | 8.45 | 0.55 | 1.10 | BUN |
| | mg/dl | 20.6 | 17.5 | 23.7 | 1.55 | 3.10 | |
| Uric Acid (Urate) | mmol/l | 0.32 | 0.28 | 0.36 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.33 | 4.62 | 6.04 | 0.36 | 0.71 | |



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RANDOX

## Roche Cobas 6000 c501 e601

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.0 | 37.4 | 50.6 | 3.30 | 6.60 | Bromocresol Green |
| | g/dl | 4.40 | 3.74 | 5.06 | 0.33 | 0.66 | |
| | g/l | 43.8 | 37.3 | 50.3 | 3.25 | 6.50 | Bromocresol Purple |
| | g/dl | 4.38 | 3.73 | 5.03 | 0.33 | 0.65 | |
| | g/l | 43.1 | 36.6 | 49.6 | 3.25 | 6.50 | Turbidimetric Assays |
| | g/dl | 4.31 | 3.66 | 4.96 | 0.33 | 0.65 | |
| Alkaline Phosphatase | U/l | 122 | 104 | 140 | 9.00 | 18.00 | Roche Integra AMP buffer 37°C |
| | U/l | 95 | 81 | 109 | 7.00 | 14.00 | Roche Integra AMP buffer 30°C |
| | U/l | 78 | 66 | 90 | 6.00 | 12.00 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 33 | 26 | 40 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 19 | 29 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 67 | 57 | 77 | 5.00 | 10.00 | Randox EPS Liquid and BM/Roche EPS Liquid 37°C |
| Amylase Total | U/l | 88 | 75 | 101 | 6.50 | 13.00 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 89 | 75 | 103 | 7.00 | 14.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 35 | 28 | 42 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 19 | 29 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 17 | 13 | 21 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 14.9 | 11.8 | 18.0 | 1.55 | 3.10 | Colorimetric |
| | mmol/l | 14.7 | 11.6 | 17.8 | 1.55 | 3.10 | Enzymatic |
| Bilirubin Direct | µmol/l | 18.4 | 14.6 | 22.2 | 1.90 | 3.80 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.08 | 0.854 | 1.31 | 0.11 | 0.23 | |



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## Roche Cobas 6000 c501 e601

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Direct | µmol/l | 18.5 | 14.6 | 22.4 | 1.95 | 3.90 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.08 | 0.854 | 1.31 | 0.11 | 0.23 | |
| | µmol/l | 18.3 | 14.5 | 22.1 | 1.90 | 3.80 | Roche JG factored |
| | mg/dl | 1.07 | 0.848 | 1.29 | 0.11 | 0.22 | |
| Bilirubin Total | µmol/l | 24.5 | 19.3 | 29.7 | 2.60 | 5.20 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.43 | 1.13 | 1.73 | 0.15 | 0.30 | |
| | µmol/l | 25.0 | 19.8 | 30.2 | 2.60 | 5.20 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 25.1 | 19.8 | 30.4 | 2.65 | 5.30 | Diazonium ion |
| | mg/dl | 1.47 | 1.16 | 1.78 | 0.16 | 0.31 | |
| Calcium | mmol/l | 2.17 | 1.95 | 2.39 | 0.11 | 0.22 | Cresolphthalein complexone |
| | mg/dl | 8.70 | 7.82 | 9.58 | 0.44 | 0.88 | |
| | mmol/l | 2.16 | 1.94 | 2.38 | 0.11 | 0.22 | NM-BAPTA |
| | mg/dl | 8.66 | 7.78 | 9.54 | 0.44 | 0.88 | |
| Chloride | mmol/l | 93.3 | 85.8 | 101 | 3.75 | 7.50 | ISE indirect |
| Cholesterol | mmol/l | 4.10 | 3.56 | 4.64 | 0.27 | 0.54 | Cholesterol Oxidase |
| | mg/dl | 158 | 137 | 179 | 10.50 | 21.00 | |
| Cholinesterase | U/l | 5287 | 4229 | 6345 | 529.00 | 1058.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 204 | 167 | 241 | 18.50 | 37.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 128 | 105 | 151 | 11.50 | 23.00 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 87 | 71 | 103 | 8.00 | 16.00 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 206 | 169 | 243 | 18.50 | 37.00 | CK-NAC (IFCC) 37°C |
| | U/l | 129 | 106 | 152 | 11.50 | 23.00 | CK-NAC (IFCC) 30°C |
| | U/l | 88 | 72 | 104 | 8.00 | 16.00 | CK-NAC (IFCC) 25°C |



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## Roche Cobas 6000 c501 e601

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| CK Total | U/l | 191 | 157 | 225 | 17.00 | 34.00 | Creatinine phosphate substrate Start 37°C |
| | U/l | 120 | 98 | 142 | 11.00 | 22.00 | Creatinine phosphate substrate Start 30°C |
| | U/l | 81 | 67 | 95 | 7.00 | 14.00 | Creatinine phosphate substrate Start 25°C |
| Creatinine | µmol/l | 133 | 107 | 159 | 13.00 | 26.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.50 | 1.21 | 1.79 | 0.15 | 0.29 | |
| | µmol/l | 133 | 106 | 160 | 13.50 | 27.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.50 | 1.20 | 1.80 | 0.15 | 0.30 | |
| | µmol/l | 133 | 107 | 159 | 13.00 | 26.00 | Roche Creatinine Plus |
| | mg/dl | 1.50 | 1.21 | 1.79 | 0.15 | 0.29 | |
| | µmol/l | 134 | 107 | 161 | 13.50 | 27.00 | Jaffe rate blanked |
| | mg/dl | 1.51 | 1.21 | 1.81 | 0.15 | 0.30 | |
| | µmol/l | 133 | 107 | 159 | 13.00 | 26.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 1.50 | 1.21 | 1.79 | 0.15 | 0.29 | |
| | µmol/l | 133 | 106 | 160 | 13.50 | 27.00 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 1.50 | 1.20 | 1.80 | 0.15 | 0.30 | |
| D-3-Hydroxybutyrate | mmol/l | 0.29 | 0.24 | 0.33 | 0.02 | 0.04 | Tris buffer 100mmol pH 8.5 |
| Free T4 | pmol/l | 24.1 | 18.1 | 30.1 | 3.00 | 6.00 | Roche Cobas 6000/8000 |
| | ng/dl | 1.88 | 1.41 | 2.35 | 0.24 | 0.47 | |
| | pg/ml | 18.8 | 14.1 | 23.5 | 2.35 | 4.70 | Roche Cobas 6000/8000 |
| gamma-GT | U/l | 46 | 39 | 53 | 3.50 | 7.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 36 | 31 | 41 | 2.50 | 5.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 28 | 24 | 32 | 2.00 | 4.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 52 | 45 | 59 | 3.50 | 7.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 41 | 35 | 47 | 3.00 | 6.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 32 | 28 | 36 | 2.00 | 4.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |



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## Roche Cobas 6000 c501 e601

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Glucose | mmol/l | 5.96 | 5.06 | 6.86 | 0.45 | 0.90 | Glucose dehydrogenase |
| | mg/dl | 107 | 91.2 | 123 | 7.90 | 15.80 | |
| | mmol/l | 6.08 | 5.17 | 6.99 | 0.46 | 0.91 | Hexokinase |
| | mg/dl | 110 | 93.2 | 127 | 8.40 | 16.80 | |
| | mmol/l | 6.06 | 5.15 | 6.97 | 0.46 | 0.91 | Glucose oxidase |
| | mg/dl | 109 | 92.8 | 125 | 8.10 | 16.20 | |
| HDL - Cholesterol | mmol/l | 1.68 | 1.43 | 1.93 | 0.13 | 0.25 | Direct HDL PEGME |
| | mg/dl | 64.8 | 55.2 | 74.4 | 4.80 | 9.60 | |
| | mmol/l | 1.65 | 1.40 | 1.90 | 0.13 | 0.25 | Direct HDL Roche 3rd generation |
| | mg/dl | 63.7 | 54.0 | 73.4 | 4.85 | 9.70 | |
| Iron | µmol/l | 18.3 | 15.0 | 21.6 | 1.65 | 3.30 | Colorimetric with ppt. |
| | µg/dl | 102 | 83.9 | 120 | 9.05 | 18.10 | |
| | µmol/l | 18.5 | 15.2 | 21.8 | 1.65 | 3.30 | Colorimetric without ppt. |
| | µg/dl | 103 | 85.0 | 121 | 9.00 | 18.00 | |
| Lactate | mmol/l | 1.45 | 1.19 | 1.71 | 0.13 | 0.26 | Colorimetric Lactate Oxidase |
| | mg/dl | 13.1 | 10.7 | 15.5 | 1.20 | 2.40 | |
| LD (LDH) | U/l | 373 | 317 | 429 | 28.00 | 56.00 | P->L German methods 37°C |
| | U/l | 269 | 229 | 309 | 20.00 | 40.00 | P->L German methods 30°C |
| | U/l | 189 | 161 | 217 | 14.00 | 28.00 | P->L German methods 25°C |
| | U/l | 190 | 162 | 218 | 14.00 | 28.00 | L->P IFCC 37°C |
| | U/l | 137 | 117 | 157 | 10.00 | 20.00 | L->P IFCC 30°C |
| | U/l | 96 | 82 | 110 | 7.00 | 14.00 | L->P IFCC 25°C |
| Lipase | U/l | 32 | 26 | 38 | 3.00 | 6.00 | Roche Colorimetric 37°C |
| | U/l | 32 | 26 | 38 | 3.00 | 6.00 | Roche Turbidimetric with colipase 37°C |
| Lithium | mmol/l | 1.06 | 0.93 | 1.19 | 0.06 | 0.13 | Spectrophotometric |
| | mg/dl | 0.736 | 0.646 | 0.826 | 0.05 | 0.09 | |



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## Roche Cobas 6000 c501 e601

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 0.94 | 0.83 | 1.06 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.29 | 2.01 | 2.57 | 0.14 | 0.28 | |
| | mmol/l | 0.94 | 0.83 | 1.05 | 0.06 | 0.11 | Chlorphosphonazo III |
| | mg/dl | 2.28 | 2.00 | 2.56 | 0.14 | 0.28 | |
| Osmolality | mOsm/kg | 287 | 230 | 344 | 28.50 | 57.00 | Calculated |
| Phosphate Inorganic | mmol/l | 1.47 | 1.25 | 1.69 | 0.11 | 0.22 | Phosphomolybdate enzymatic |
| | mg/dl | 4.56 | 3.88 | 5.24 | 0.34 | 0.68 | |
| | mmol/l | 1.45 | 1.23 | 1.67 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.50 | 3.81 | 5.19 | 0.35 | 0.69 | |
| Potassium | mmol/l | 4.15 | 3.82 | 4.48 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 59.6 | 47.7 | 71.5 | 5.95 | 11.90 | Biuret reaction end point |
| | g/dl | 5.96 | 4.77 | 7.15 | 0.60 | 1.19 | |
| | g/l | 58.4 | 46.7 | 70.1 | 5.85 | 11.70 | Biuret reaction kinetic |
| | g/dl | 5.84 | 4.67 | 7.01 | 0.59 | 1.17 | |
| PSA Total | ng/ml = | 14.0 | 10.5 | 17.5 | 1.75 | 3.50 | Roche Cobas 6000/8000 |
| Sodium | mmol/l | 144 | 137 | 151 | 3.50 | 7.00 | ISE method - indirect |
| Thyroid Stimulating Hormone | µU/ml = | 1.45 | 1.16 | 1.74 | 0.15 | 0.29 | Roche Cobas 6000/8000 |
| TIBC | µmol/l | 44.7 | 35.3 | 54.1 | 4.70 | 9.40 | FE+UIBC(saturation with iron) |
| | µg/dl | 250 | 197 | 303 | 26.50 | 53.00 | |
| | µmol/l | 47.3 | 37.3 | 57.3 | 5.00 | 10.00 | Calculated from Transferrin |
| | µg/dl | 264 | 209 | 319 | 27.50 | 55.00 | |
| Total T3 | nmol/l | 2.39 | 1.79 | 2.99 | 0.30 | 0.60 | Roche Cobas 6000/8000 |
| | ng/ml | 1.56 | 1.17 | 1.95 | 0.20 | 0.39 | |
| | ng/dl | 156 | 117 | 195 | 19.50 | 39.00 | Roche Cobas 6000/8000 |



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## Roche Cobas 6000 c501 e601

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Total T4 | nmol/l | 91.8 | 68.9 | 115 | 11.45 | 22.90 | Roche Cobas 6000/8000 |
| | µg/dl | 7.16 | 5.37 | 8.95 | 0.90 | 1.79 | |
| | ng/ml | 71.6 | 53.7 | 89.5 | 8.95 | 17.90 | Roche Cobas 6000/8000 |
| Triglycerides | mmol/l | 1.12 | 0.94 | 1.30 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 99.1 | 83.5 | 115 | 7.80 | 15.60 | |
| | mmol/l | 1.08 | 0.91 | 1.25 | 0.09 | 0.17 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 95.6 | 80.3 | 111 | 7.65 | 15.30 | |
| | mmol/l | 1.12 | 0.94 | 1.30 | 0.09 | 0.18 | L/G Kinase EP. no correction |
| | mg/dl | 99.1 | 83.3 | 115 | 7.90 | 15.80 | |
| UIBC | µmol/l | 26.7 | 21.9 | 31.5 | 2.40 | 4.80 | Direct Colorimetric |
| | µg/dl | 149 | 122 | 176 | 13.50 | 27.00 | |
| Urea | mmol/l | 7.10 | 6.04 | 8.16 | 0.53 | 1.06 | Urease kinetic |
| | mg/dl | 42.7 | 36.3 | 49.1 | 3.20 | 6.40 | |
| | mmol/l | 7.10 | 6.04 | 8.16 | 0.53 | 1.06 | BUN |
| | mg/dl | 19.9 | 16.9 | 22.9 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.29 | 0.37 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.51 | 4.79 | 6.23 | 0.36 | 0.72 | |
| | mmol/l | 0.33 | 0.29 | 0.37 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.53 | 4.82 | 6.24 | 0.36 | 0.71 | |
| | mmol/l | 0.33 | 0.29 | 0.37 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.53 | 4.80 | 6.26 | 0.37 | 0.73 | |



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## Roche Cobas C111®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.4 | 37.8 | 51.0 | 3.30 | 6.60 | Bromocresol Green |
| | g/dl | 4.44 | 3.78 | 5.10 | 0.33 | 0.66 | |
| Alkaline Phosphatase | U/l | 119 | 101 | 137 | 9.00 | 18.00 | Roche Integra AMP buffer 37°C |
| | U/l | 93 | 79 | 107 | 7.00 | 14.00 | Roche Integra AMP buffer 30°C |
| | U/l | 76 | 65 | 87 | 5.50 | 11.00 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 33 | 26 | 40 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 19 | 29 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 91 | 77 | 105 | 7.00 | 14.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 35 | 28 | 42 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 19 | 29 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 17 | 13 | 21 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 17.2 | 13.6 | 20.8 | 1.80 | 3.60 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.01 | 0.796 | 1.22 | 0.11 | 0.21 | |
| | µmol/l | 16.8 | 13.3 | 20.3 | 1.75 | 3.50 | Diazo with Sulphanilic Acid |
| | mg/dl | 0.983 | 0.778 | 1.19 | 0.10 | 0.21 | |
| Bilirubin Total | µmol/l | 25.1 | 19.8 | 30.4 | 2.65 | 5.30 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.47 | 1.16 | 1.78 | 0.16 | 0.31 | |
| | µmol/l | 25.1 | 19.8 | 30.4 | 2.65 | 5.30 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.47 | 1.16 | 1.78 | 0.16 | 0.31 | |
| | µmol/l | 25.0 | 19.8 | 30.2 | 2.60 | 5.20 | Diazonium ion |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |



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## Roche Cobas C111®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Calcium | mmol/l | 2.10 | 1.89 | 2.31 | 0.11 | 0.21 | Cresolphthalein complexone |
| | mg/dl | 8.42 | 7.58 | 9.26 | 0.42 | 0.84 | |
| | mmol/l | 2.15 | 1.93 | 2.37 | 0.11 | 0.22 | NM-BAPTA |
| | mg/dl | 8.62 | 7.74 | 9.50 | 0.44 | 0.88 | |
| Chloride | mmol/l | 99.7 | 91.8 | 108 | 3.95 | 7.90 | ISE indirect |
| Cholesterol | mmol/l | 4.10 | 3.57 | 4.63 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 158 | 138 | 178 | 10.00 | 20.00 | |
| CK Total | U/l | 213 | 175 | 251 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| | U/l | 133 | 110 | 156 | 11.50 | 23.00 | CK-NAC (IFCC) 30°C |
| | U/l | 91 | 74 | 108 | 8.50 | 17.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Roche Creatinine Plus |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 124 | 99.4 | 149 | 12.30 | 24.60 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 1.40 | 1.12 | 1.68 | 0.14 | 0.28 | |
| gamma-GT | U/l | 50 | 42 | 58 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 39 | 33 | 45 | 3.00 | 6.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 31 | 26 | 36 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 6.19 | 5.26 | 7.12 | 0.47 | 0.93 | Hexokinase |
| | mg/dl | 112 | 94.8 | 129 | 8.60 | 17.20 | |
| HDL - Cholesterol | mmol/l | 1.74 | 1.48 | 2.00 | 0.13 | 0.26 | Direct HDL Roche 3rd generation |
| | mg/dl | 67.2 | 57.1 | 77.3 | 5.05 | 10.10 | |
| LD (LDH) | U/l | 204 | 173 | 235 | 15.50 | 31.00 | L->P IFCC 37°C |
| | U/l | 147 | 125 | 169 | 11.00 | 22.00 | L->P IFCC 30°C |
| | U/l | 103 | 88 | 118 | 7.50 | 15.00 | L->P IFCC 25°C |



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## Roche Cobas C111®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 0.94 | 0.82 | 1.05 | 0.06 | 0.11 | Chlorphosphonazo III |
| | mg/dl | 2.27 | 2.00 | 2.54 | 0.14 | 0.27 | |
| Phosphate Inorganic | mmol/l | 1.50 | 1.27 | 1.73 | 0.12 | 0.23 | Phosphomolybdate UV |
| | mg/dl | 4.65 | 3.94 | 5.36 | 0.36 | 0.71 | |
| Potassium | mmol/l | 4.04 | 3.72 | 4.36 | 0.16 | 0.32 | ISE method - indirect |
| Protein Total | g/l | 59.5 | 47.6 | 71.4 | 5.95 | 11.90 | Biuret reaction end point |
| | g/dl | 5.95 | 4.76 | 7.14 | 0.60 | 1.19 | |
| Sodium | mmol/l | 139 | 132 | 146 | 3.50 | 7.00 | ISE method - indirect |
| Triglycerides | mmol/l | 1.09 | 0.92 | 1.26 | 0.09 | 0.17 | Lipase/GPO-PAP no correction |
| | mg/dl | 96.5 | 81.1 | 112 | 7.70 | 15.40 | |
| Urea | mmol/l | 6.83 | 5.81 | 7.85 | 0.51 | 1.02 | Urease kinetic |
| | mg/dl | 41.0 | 34.9 | 47.1 | 3.05 | 6.10 | |
| | mmol/l | 6.83 | 5.81 | 7.85 | 0.51 | 1.02 | BUN |
| | mg/dl | 19.2 | 16.3 | 22.1 | 1.45 | 2.90 | |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.63 | 4.89 | 6.37 | 0.37 | 0.74 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.64 | 4.91 | 6.37 | 0.37 | 0.73 | |
| | mmol/l | 0.34 | 0.30 | 0.38 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.70 | 4.96 | 6.44 | 0.37 | 0.74 | |



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## Roche Cobas C311®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.3 | 37.7 | 50.9 | 3.30 | 6.60 | Bromocresol Green |
| | g/dl | 4.43 | 3.77 | 5.09 | 0.33 | 0.66 | |
| | g/l | 44.5 | 37.9 | 51.1 | 3.30 | 6.60 | Bromocresol Purple |
| | g/dl | 4.45 | 3.79 | 5.11 | 0.33 | 0.66 | |
| Alkaline Phosphatase | U/l | 121 | 103 | 139 | 9.00 | 18.00 | Roche Integra AMP buffer 37°C |
| | U/l | 94 | 80 | 108 | 7.00 | 14.00 | Roche Integra AMP buffer 30°C |
| | U/l | 77 | 66 | 88 | 5.50 | 11.00 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 33 | 27 | 39 | 3.00 | 6.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer without P5P 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 90 | 76 | 104 | 7.00 | 14.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer without P5P 30°C |
| | U/l | 17 | 14 | 20 | 1.50 | 3.00 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 14.6 | 11.6 | 17.6 | 1.50 | 3.00 | Enzymatic |
| Bilirubin Direct | µmol/l | 18.9 | 14.9 | 22.9 | 2.00 | 4.00 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.11 | 0.872 | 1.35 | 0.12 | 0.24 | |
| | µmol/l | 19.1 | 15.1 | 23.1 | 2.00 | 4.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.12 | 0.883 | 1.36 | 0.12 | 0.24 | |
| Bilirubin Total | µmol/l | 25.0 | 19.8 | 30.2 | 2.60 | 5.20 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |



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## Roche Cobas C311®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Bilirubin Total | µmol/l | 25.0 | 19.7 | 30.3 | 2.65 | 5.30 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.46 | 1.15 | 1.77 | 0.16 | 0.31 | |
| | µmol/l | 25.5 | 20.1 | 30.9 | 2.70 | 5.40 | Diazonium ion |
| | mg/dl | 1.49 | 1.18 | 1.80 | 0.16 | 0.31 | |
| Calcium | mmol/l | 2.20 | 1.98 | 2.42 | 0.11 | 0.22 | Cresolphthalein complexone |
| | mg/dl | 8.82 | 7.94 | 9.70 | 0.44 | 0.88 | |
| | mmol/l | 2.18 | 1.96 | 2.40 | 0.11 | 0.22 | NM-BAPTA |
| | mg/dl | 8.74 | 7.86 | 9.62 | 0.44 | 0.88 | |
| Chloride | mmol/l | 93.8 | 86.3 | 101 | 3.75 | 7.50 | ISE indirect |
| Cholesterol | mmol/l | 4.12 | 3.59 | 4.65 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 159 | 139 | 179 | 10.00 | 20.00 | |
| CK Total | U/l | 211 | 173 | 249 | 19.00 | 38.00 | CK-NAC (IFCC) 37°C |
| | U/l | 132 | 108 | 156 | 12.00 | 24.00 | CK-NAC (IFCC) 30°C |
| | U/l | 90 | 74 | 106 | 8.00 | 16.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 133 | 107 | 159 | 13.00 | 26.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.50 | 1.21 | 1.79 | 0.15 | 0.29 | |
| | µmol/l | 135 | 108 | 162 | 13.50 | 27.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.53 | 1.22 | 1.84 | 0.16 | 0.31 | |
| | µmol/l | 135 | 108 | 162 | 13.50 | 27.00 | Roche Creatinine Plus |
| | mg/dl | 1.53 | 1.22 | 1.84 | 0.16 | 0.31 | |
| | µmol/l | 133 | 106 | 160 | 13.50 | 27.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 1.50 | 1.20 | 1.80 | 0.15 | 0.30 | |
| gamma-GT | U/l | 47 | 40 | 54 | 3.50 | 7.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 37 | 32 | 42 | 2.50 | 5.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 29 | 25 | 33 | 2.00 | 4.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |



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## Roche Cobas C311®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| gamma-GT | U/l | 53 | 45 | 61 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 42 | 35 | 49 | 3.50 | 7.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 33 | 28 | 38 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 6.14 | 5.22 | 7.06 | 0.46 | 0.92 | Hexokinase |
| | mg/dl | 111 | 94.1 | 128 | 8.45 | 16.90 | |
| | mmol/l | 6.04 | 5.13 | 6.95 | 0.46 | 0.91 | Glucose oxidase |
| | mg/dl | 109 | 92.4 | 126 | 8.30 | 16.60 | |
| HDL - Cholesterol | mmol/l | 1.69 | 1.44 | 1.94 | 0.13 | 0.25 | Direct HDL PEGME |
| | mg/dl | 65.2 | 55.6 | 74.8 | 4.80 | 9.60 | |
| | mmol/l | 1.69 | 1.44 | 1.94 | 0.13 | 0.25 | Direct HDL Roche 3rd generation |
| | mg/dl | 65.2 | 55.6 | 74.8 | 4.80 | 9.60 | |
| Iron | µmol/l | 18.8 | 15.4 | 22.2 | 1.70 | 3.40 | Colorimetric without ppt. |
| | µg/dl | 105 | 86.1 | 124 | 9.45 | 18.90 | |
| Lactate | mmol/l | 1.45 | 1.18 | 1.72 | 0.14 | 0.27 | Colorimetric Lactate Oxidase |
| | mg/dl | 13.1 | 10.6 | 15.6 | 1.25 | 2.50 | |
| LD (LDH) | U/l | 373 | 317 | 429 | 28.00 | 56.00 | P->L German methods 37°C |
| | U/l | 269 | 229 | 309 | 20.00 | 40.00 | P->L German methods 30°C |
| | U/l | 189 | 161 | 217 | 14.00 | 28.00 | P->L German methods 25°C |
| | U/l | 192 | 163 | 221 | 14.50 | 29.00 | L->P IFCC 37°C |
| | U/l | 139 | 118 | 160 | 10.50 | 21.00 | L->P IFCC 30°C |
| | U/l | 97 | 83 | 111 | 7.00 | 14.00 | L->P IFCC 25°C |
| Lipase | U/l | 31 | 25 | 37 | 3.00 | 6.00 | Roche Colorimetric 37°C |
| Magnesium | mmol/l | 0.95 | 0.83 | 1.06 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.30 | 2.03 | 2.57 | 0.14 | 0.27 | |
| | mmol/l | 0.95 | 0.84 | 1.06 | 0.06 | 0.11 | Chlorphosphonazo III |
| | mg/dl | 2.31 | 2.03 | 2.59 | 0.14 | 0.28 | |



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## Roche Cobas C311®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Phosphate Inorganic | mmol/l | 1.46 | 1.24 | 1.68 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.53 | 3.84 | 5.22 | 0.35 | 0.69 | |
| Potassium | mmol/l | 4.18 | 3.85 | 4.51 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 60.0 | 48.0 | 72.0 | 6.00 | 12.00 | Biuret reaction end point |
| | g/dl | 6.00 | 4.80 | 7.20 | 0.60 | 1.20 | |
| Sodium | mmol/l | 145 | 138 | 152 | 3.50 | 7.00 | ISE method - indirect |
| Triglycerides | mmol/l | 1.12 | 0.94 | 1.30 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 99.1 | 83.4 | 115 | 7.85 | 15.70 | |
| | mmol/l | 1.11 | 0.93 | 1.29 | 0.09 | 0.18 | L/G Kinase EP. no correction |
| | mg/dl | 98.2 | 82.5 | 114 | 7.85 | 15.70 | |
| Urea | mmol/l | 7.27 | 6.18 | 8.36 | 0.55 | 1.09 | Urease kinetic |
| | mg/dl | 43.7 | 37.1 | 50.3 | 3.30 | 6.60 | |
| | mmol/l | 7.27 | 6.18 | 8.36 | 0.55 | 1.09 | BUN |
| | mg/dl | 20.4 | 17.3 | 23.5 | 1.55 | 3.10 | |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.30 | 0.38 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.70 | 4.96 | 6.44 | 0.37 | 0.74 | |
| | mmol/l | 0.34 | 0.30 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.71 | 4.97 | 6.45 | 0.37 | 0.74 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.64 | 4.91 | 6.37 | 0.37 | 0.73 | |



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# Roche Cobas c701 / c702 / c711

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.1 | 37.5 | 50.7 | 3.30 | 6.60 | Bromocresol Green |
| | g/dl | 4.41 | 3.75 | 5.07 | 0.33 | 0.66 | |
| Alkaline Phosphatase | U/l | 106 | 90 | 122 | 8.00 | 16.00 | Roche Integra AMP buffer 37°C |
| | U/l | 83 | 70 | 96 | 6.50 | 13.00 | Roche Integra AMP buffer 30°C |
| | U/l | 68 | 58 | 78 | 5.00 | 10.00 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 34 | 27 | 41 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 25 | 20 | 30 | 2.50 | 5.00 | Tris buffer without P5P 30°C |
| | U/l | 19 | 15 | 23 | 2.00 | 4.00 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 90 | 76 | 104 | 7.00 | 14.00 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 36 | 29 | 43 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| | U/l | 24 | 20 | 28 | 2.00 | 4.00 | Tris buffer without P5P 30°C |
| | U/l | 17 | 14 | 20 | 1.50 | 3.00 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 15.0 | 11.9 | 18.1 | 1.55 | 3.10 | Enzymatic |
| Bilirubin Direct | µmol/l | 18.8 | 14.9 | 22.7 | 1.95 | 3.90 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.10 | 0.872 | 1.33 | 0.11 | 0.23 | |
| Bilirubin Total | µmol/l | 23.8 | 18.8 | 28.8 | 2.50 | 5.00 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.39 | 1.10 | 1.68 | 0.15 | 0.29 | |
| | µmol/l | 24.0 | 18.9 | 29.1 | 2.55 | 5.10 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.40 | 1.11 | 1.69 | 0.15 | 0.29 | |
| | µmol/l | 23.8 | 18.8 | 28.8 | 2.50 | 5.00 | Diazonium ion |
| | mg/dl | 1.39 | 1.10 | 1.68 | 0.15 | 0.29 | |



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## Roche Cobas c701 / c702 / c711

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Calcium | mmol/l | 2.13 | 1.91 | 2.35 | 0.11 | 0.22 | Cresolphthalein complexone |
| | mg/dl | 8.54 | 7.66 | 9.42 | 0.44 | 0.88 | |
| | mmol/l | 2.14 | 1.93 | 2.35 | 0.11 | 0.21 | NM-BAPTA |
| | mg/dl | 8.58 | 7.74 | 9.42 | 0.42 | 0.84 | |
| Chloride | mmol/l | 93.6 | 86.1 | 101 | 3.75 | 7.50 | ISE indirect |
| Cholesterol | mmol/l | 4.05 | 3.52 | 4.58 | 0.27 | 0.53 | Cholesterol Oxidase |
| | mg/dl | 156 | 136 | 176 | 10.00 | 20.00 | |
| CK Total | U/l | 200 | 164 | 236 | 18.00 | 36.00 | CK-NAC (IFCC) 37°C |
| | U/l | 125 | 103 | 147 | 11.00 | 22.00 | CK-NAC (IFCC) 30°C |
| | U/l | 85 | 70 | 100 | 7.50 | 15.00 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 137 | 109 | 165 | 14.00 | 28.00 | Roche Creatinine Plus |
| | mg/dl | 1.55 | 1.23 | 1.87 | 0.16 | 0.32 | |
| | µmol/l | 128 | 103 | 153 | 12.50 | 25.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 1.45 | 1.16 | 1.74 | 0.15 | 0.29 | |
| gamma-GT | U/l | 46 | 39 | 53 | 3.50 | 7.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 36 | 31 | 41 | 2.50 | 5.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 28 | 24 | 32 | 2.00 | 4.00 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 52 | 44 | 60 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 41 | 35 | 47 | 3.00 | 6.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 32 | 27 | 37 | 2.50 | 5.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 6.07 | 5.16 | 6.98 | 0.46 | 0.91 | Hexokinase |
| | mg/dl | 109 | 93.0 | 125 | 8.00 | 16.00 | |
| | mmol/l | 6.06 | 5.15 | 6.97 | 0.46 | 0.91 | Glucose oxidase |
| | mg/dl | 109 | 92.8 | 125 | 8.10 | 16.20 | |
| HDL - Cholesterol | mmol/l | 1.60 | 1.36 | 1.84 | 0.12 | 0.24 | Direct HDL Roche 3rd generation |
| | mg/dl | 61.8 | 52.5 | 71.1 | 4.65 | 9.30 | |



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## Roche Cobas c701 / c702 / c711

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Iron | µmol/l | 18.2 | 14.9 | 21.5 | 1.65 | 3.30 | Colorimetric without ppt. |
| | µg/dl | 102 | 83.3 | 121 | 9.35 | 18.70 | |
| Lactate | mmol/l | 1.45 | 1.19 | 1.71 | 0.13 | 0.26 | Colorimetric Lactate Oxidase |
| | mg/dl | 13.1 | 10.7 | 15.5 | 1.20 | 2.40 | |
| LD (LDH) | U/l | 193 | 164 | 222 | 14.50 | 29.00 | L->P IFCC 37°C |
| | U/l | 139 | 118 | 160 | 10.50 | 21.00 | L->P IFCC 30°C |
| | U/l | 98 | 83 | 113 | 7.50 | 15.00 | L->P IFCC 25°C |
| Lipase | U/l | 32 | 25 | 39 | 3.50 | 7.00 | Roche Colorimetric 37°C |
| Lithium | mmol/l | 1.07 | 0.94 | 1.20 | 0.07 | 0.13 | Spectrophotometric |
| | mg/dl | 0.743 | 0.653 | 0.833 | 0.05 | 0.09 | |
| Magnesium | mmol/l | 0.93 | 0.82 | 1.04 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.25 | 1.98 | 2.52 | 0.14 | 0.27 | |
| Phosphate Inorganic | mmol/l | 1.43 | 1.21 | 1.65 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.43 | 3.75 | 5.11 | 0.34 | 0.68 | |
| Potassium | mmol/l | 4.16 | 3.83 | 4.49 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 59.5 | 47.6 | 71.4 | 5.95 | 11.90 | Biuret reaction end point |
| | g/dl | 5.95 | 4.76 | 7.14 | 0.60 | 1.19 | |
| Sodium | mmol/l | 145 | 138 | 152 | 3.50 | 7.00 | ISE method - indirect |
| TIBC | µmol/l | 46.3 | 36.6 | 56.0 | 4.85 | 9.70 | FE+UIBC(saturation with iron) |
| | µg/dl | 259 | 205 | 313 | 27.00 | 54.00 | |
| | µmol/l | 45.3 | 35.8 | 54.8 | 4.75 | 9.50 | Calculated from Transferrin |
| | µg/dl | 253 | 200 | 306 | 26.50 | 53.00 | |
| Triglycerides | mmol/l | 1.11 | 0.94 | 1.28 | 0.09 | 0.17 | Lipase/GPO-PAP no correction |
| | mg/dl | 98.2 | 82.8 | 114 | 7.70 | 15.40 | |



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## Roche Cobas c701 / c702 / c711

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Triglycerides | mmol/l | 1.11 | 0.94 | 1.28 | 0.09 | 0.17 | L/G Kinase EP. no correction |
| | mg/dl | 98.2 | 82.8 | 114 | 7.70 | 15.40 | |
| UIBC | µmol/l | 28.5 | 23.4 | 33.6 | 2.55 | 5.10 | Direct Colorimetric |
| | µg/dl | 159 | 131 | 187 | 14.00 | 28.00 | |
| Urea | mmol/l | 6.94 | 5.90 | 7.98 | 0.52 | 1.04 | Urease kinetic |
| | mg/dl | 41.7 | 35.5 | 47.9 | 3.10 | 6.20 | |
| | mmol/l | 6.94 | 5.90 | 7.98 | 0.52 | 1.04 | BUN |
| | mg/dl | 19.5 | 16.6 | 22.4 | 1.45 | 2.90 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.28 | 0.37 | 0.02 | 0.04 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 5.48 | 4.77 | 6.19 | 0.36 | 0.71 | |
| | mmol/l | 0.33 | 0.28 | 0.37 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.49 | 4.77 | 6.21 | 0.36 | 0.72 | |
| | mmol/l | 0.33 | 0.28 | 0.37 | 0.02 | 0.04 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.48 | 4.75 | 6.21 | 0.37 | 0.73 | |



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## RX SERIES®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 43.0 | 36.6 | 49.4 | 3.20 | 6.40 | Bromocresol Green |
| | g/dl | 4.30 | 3.66 | 4.94 | 0.32 | 0.64 | |
| Alkaline Phosphatase | U/l | 317 | 269 | 365 | 24.00 | 48.00 | Diethanolamine buffer DEA 37°C |
| | U/l | 181 | 154 | 208 | 13.50 | 27.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 37 | 30 | 44 | 3.50 | 7.00 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 79 | 67 | 91 | 6.00 | 12.00 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 99 | 84 | 114 | 7.50 | 15.00 | Randox Liquid Ethylidene pNPG7 37°C |
| AST (GOT) | U/l | 40 | 32 | 48 | 4.00 | 8.00 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 15.2 | 12.1 | 18.3 | 1.55 | 3.10 | Enzymatic |
| Bile Acids | µmol/l | 23.6 | 18.9 | 28.3 | 2.35 | 4.70 | 5th Generation Colorimetric |
| Bilirubin Direct | µmol/l | 19.9 | 15.7 | 24.1 | 2.10 | 4.20 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.16 | 0.918 | 1.40 | 0.12 | 0.24 | |
| | µmol/l | 16.1 | 12.7 | 19.5 | 1.70 | 3.40 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 0.942 | 0.743 | 1.14 | 0.10 | 0.20 | |
| Bilirubin Total | µmol/l | 31.3 | 24.7 | 37.9 | 3.30 | 6.60 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.83 | 1.44 | 2.22 | 0.20 | 0.39 | |
| | µmol/l | 26.8 | 21.2 | 32.4 | 2.80 | 5.60 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.57 | 1.24 | 1.90 | 0.17 | 0.33 | |
| Calcium | mmol/l | 2.25 | 2.03 | 2.47 | 0.11 | 0.22 | Arsenazo III |
| | mg/dl | 9.02 | 8.14 | 9.90 | 0.44 | 0.88 | |
| Chloride | mmol/l | 97.5 | 89.7 | 105 | 3.90 | 7.80 | ISE direct |



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## RX SERIES®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Cholesterol | mmol/l | 4.26 | 3.70 | 4.82 | 0.28 | 0.56 | Cholesterol Oxidase |
| | mg/dl | 164 | 143 | 185 | 10.50 | 21.00 | |
| CK Total | U/l | 214 | 175 | 253 | 19.50 | 39.00 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 231 | 189 | 273 | 21.00 | 42.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 126 | 101 | 151 | 12.50 | 25.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.42 | 1.14 | 1.70 | 0.14 | 0.28 | |
| | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| gamma-GT | U/l | 59 | 50 | 68 | 4.50 | 9.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 6.38 | 5.42 | 7.34 | 0.48 | 0.96 | Hexokinase |
| | mg/dl | 115 | 97.7 | 132 | 8.65 | 17.30 | |
| | mmol/l | 6.28 | 5.34 | 7.22 | 0.47 | 0.94 | Glucose oxidase |
| | mg/dl | 113 | 96.2 | 130 | 8.40 | 16.80 | |
| Iron | µmol/l | 18.7 | 15.3 | 22.1 | 1.70 | 3.40 | Colorimetric without ppt. |
| | µg/dl | 105 | 85.5 | 125 | 9.75 | 19.50 | |
| Lactate | mmol/l | 1.37 | 1.12 | 1.62 | 0.13 | 0.25 | Colorimetric Lactate Oxidase |
| | mg/dl | 12.3 | 10.1 | 14.5 | 1.10 | 2.20 | |
| LD (LDH) | U/l | 391 | 332 | 450 | 29.50 | 59.00 | P->L German methods 37°C |
| | U/l | 189 | 161 | 217 | 14.00 | 28.00 | L->P IFCC 37°C |
| Lipase | U/l | 43 | 34 | 52 | 4.50 | 9.00 | Randox Colorimetric 37°C |
| Lithium | mmol/l | 1.02 | 0.90 | 1.14 | 0.06 | 0.12 | Colorimetric |
| | mg/dl | 0.708 | 0.624 | 0.792 | 0.04 | 0.08 | |
| Magnesium | mmol/l | 0.98 | 0.86 | 1.09 | 0.06 | 0.12 | Xylidyl Blue |
| | mg/dl | 2.37 | 2.08 | 2.66 | 0.15 | 0.29 | |
| Phosphate Inorganic | mmol/l | 1.47 | 1.25 | 1.69 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.56 | 3.88 | 5.24 | 0.34 | 0.68 | |



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## RX SERIES®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Potassium | mmol/l | 4.05 | 3.73 | 4.37 | 0.16 | 0.32 | Enzymatic |
| | mmol/l | 4.15 | 3.82 | 4.48 | 0.17 | 0.33 | ISE method - direct |
| Protein Total | g/l | 61.2 | 48.9 | 73.5 | 6.15 | 12.30 | Biuret reaction end point |
| | g/dl | 6.12 | 4.89 | 7.35 | 0.62 | 1.23 | |
| Sodium | mmol/l | 143 | 136 | 150 | 3.50 | 7.00 | Enzymatic |
| | mmol/l | 143 | 136 | 150 | 3.50 | 7.00 | ISE method - direct |
| TIBC | µmol/l | 54.6 | 43.1 | 66.1 | 5.75 | 11.50 | Direct Colorimetric |
| | µg/dl | 305 | 241 | 369 | 32.00 | 64.00 | |
| Triglycerides | mmol/l | 1.11 | 0.93 | 1.29 | 0.09 | 0.18 | Lipase/GPO-PAP no correction |
| | mg/dl | 98.2 | 82.5 | 114 | 7.85 | 15.70 | |
| Urea | mmol/l | 7.24 | 6.15 | 8.33 | 0.55 | 1.09 | Urease kinetic |
| | mg/dl | 43.5 | 37.0 | 50.0 | 3.25 | 6.50 | |
| | mmol/l | 7.24 | 6.15 | 8.33 | 0.55 | 1.09 | BUN |
| | mg/dl | 20.3 | 17.3 | 23.3 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.29 | 0.37 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.53 | 4.80 | 6.26 | 0.37 | 0.73 | |
| | mmol/l | 0.35 | 0.30 | 0.39 | 0.02 | 0.05 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 5.81 | 5.06 | 6.56 | 0.38 | 0.75 | |



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## SIEMENS ADVIA 1200/1650/1800/2400®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 41.5 | 35.3 | 47.7 | 3.10 | 6.20 | Bromocresol Green |
| | g/dl | 4.15 | 3.53 | 4.77 | 0.31 | 0.62 | |
| | g/l | 44.0 | 37.4 | 50.6 | 3.30 | 6.60 | Bromocresol Purple |
| | g/dl | 4.40 | 3.74 | 5.06 | 0.33 | 0.66 | |
| Alkaline Phosphatase | U/l | 153 | 130 | 176 | 11.50 | 23.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 37 | 29 | 45 | 4.00 | 8.00 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 67 | 57 | 77 | 5.00 | 10.00 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 91 | 78 | 104 | 6.50 | 13.00 | Siemens - blocked pNPG7 37°C |
| AST (GOT) | U/l | 39 | 31 | 47 | 4.00 | 8.00 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 16.9 | 13.4 | 20.4 | 1.75 | 3.50 | Enzymatic |
| Bilirubin Direct | µmol/l | 15.7 | 12.4 | 19.0 | 1.65 | 3.30 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 0.918 | 0.725 | 1.11 | 0.10 | 0.19 | |
| Bilirubin Total | µmol/l | 27.3 | 21.5 | 33.1 | 2.90 | 5.80 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.60 | 1.26 | 1.94 | 0.17 | 0.34 | |
| Calcium | mmol/l | 2.11 | 1.90 | 2.32 | 0.11 | 0.21 | Cresolphthalein complexone |
| | mg/dl | 8.46 | 7.62 | 9.30 | 0.42 | 0.84 | |
| | mmol/l | 2.19 | 1.97 | 2.41 | 0.11 | 0.22 | Arsenazo III |
| | mg/dl | 8.78 | 7.90 | 9.66 | 0.44 | 0.88 | |
| Chloride | mmol/l | 99.4 | 91.5 | 107 | 3.95 | 7.90 | ISE indirect |
| Cholesterol | mmol/l | 4.17 | 3.63 | 4.71 | 0.27 | 0.54 | Cholesterol Oxidase |
| | mg/dl | 161 | 140 | 182 | 10.50 | 21.00 | |



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## SIEMENS ADVIA 1200/1650/1800/2400®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Cholinesterase | U/l | 5860 | 4688 | 7032 | 586.00 | 1172.00 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 204 | 168 | 240 | 18.00 | 36.00 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 129 | 104 | 154 | 12.50 | 25.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.46 | 1.18 | 1.74 | 0.14 | 0.28 | |
| | µmol/l | 127 | 102 | 152 | 12.50 | 25.00 | Jaffe rate blanked |
| | mg/dl | 1.44 | 1.15 | 1.73 | 0.15 | 0.29 | |
| | µmol/l | 128 | 103 | 153 | 12.50 | 25.00 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 1.45 | 1.16 | 1.74 | 0.15 | 0.29 | |
| gamma-GT | U/l | 52 | 44 | 60 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 6.00 | 5.10 | 6.90 | 0.45 | 0.90 | Hexokinase |
| | mg/dl | 108 | 91.9 | 124 | 8.05 | 16.10 | |
| | mmol/l | 6.06 | 5.15 | 6.97 | 0.46 | 0.91 | Glucose oxidase |
| | mg/dl | 109 | 92.8 | 125 | 8.10 | 16.20 | |
| HDL - Cholesterol | mmol/l | 1.05 | 0.90 | 1.20 | 0.08 | 0.15 | Direct Clearance Method |
| | mg/dl | 40.5 | 34.6 | 46.4 | 2.95 | 5.90 | |
| Iron | µmol/l | 18.7 | 15.3 | 22.1 | 1.70 | 3.40 | Colorimetric without ppt. |
| | µg/dl | 105 | 85.5 | 125 | 9.75 | 19.50 | |
| Lactate | mmol/l | 1.30 | 1.06 | 1.54 | 0.12 | 0.24 | Colorimetric Lactate Oxidase |
| | mg/dl | 11.7 | 9.55 | 13.9 | 1.08 | 2.15 | |
| LD (LDH) | U/l | 184 | 156 | 212 | 14.00 | 28.00 | L->P 37°C |
| | U/l | 367 | 312 | 422 | 27.50 | 55.00 | P->L German methods 37°C |
| | U/l | 192 | 164 | 220 | 14.00 | 28.00 | L->P IFCC 37°C |
| Lipase | U/l | 40 | 32 | 48 | 4.00 | 8.00 | Other Colorimetric 37°C |
| Lithium | mmol/l | 1.05 | 0.92 | 1.18 | 0.06 | 0.13 | Spectrophotometric |
| | mg/dl | 0.729 | 0.640 | 0.818 | 0.04 | 0.09 | |



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## SIEMENS ADVIA 1200/1650/1800/2400®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Magnesium | mmol/l | 0.95 | 0.83 | 1.06 | 0.06 | 0.11 | Xylidyl Blue |
| | mg/dl | 2.30 | 2.02 | 2.58 | 0.14 | 0.28 | |
| Phosphate Inorganic | mmol/l | 1.47 | 1.25 | 1.69 | 0.11 | 0.22 | Phosphomolybdate UV |
| | mg/dl | 4.56 | 3.88 | 5.24 | 0.34 | 0.68 | |
| Potassium | mmol/l | 4.15 | 3.82 | 4.48 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 61.2 | 49.0 | 73.4 | 6.10 | 12.20 | Biuret reaction end point |
| | g/dl | 6.12 | 4.90 | 7.34 | 0.61 | 1.22 | |
| Sodium | mmol/l | 145 | 137 | 153 | 4.00 | 8.00 | ISE method - indirect |
| TIBC | µmol/l | 51.4 | 40.6 | 62.2 | 5.40 | 10.80 | Direct Colorimetric |
| | µg/dl | 287 | 227 | 347 | 30.00 | 60.00 | |
| Triglycerides | mmol/l | 1.17 | 0.98 | 1.36 | 0.09 | 0.19 | Lipase/GPO-PAP no correction |
| | mg/dl | 104 | 87.1 | 121 | 8.45 | 16.90 | |
| Urea | mmol/l | 7.37 | 6.26 | 8.48 | 0.56 | 1.11 | Urease kinetic |
| | mg/dl | 44.3 | 37.6 | 51.0 | 3.35 | 6.70 | |
| | mmol/l | 7.37 | 6.26 | 8.48 | 0.56 | 1.11 | BUN |
| | mg/dl | 20.7 | 17.6 | 23.8 | 1.55 | 3.10 | |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.64 | 4.91 | 6.37 | 0.37 | 0.73 | |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 44.7 | 38.0 | 51.4 | 3.35 | 6.70 | Bromocresol Purple |
| | g/dl | 4.47 | 3.80 | 5.14 | 0.34 | 0.67 | |
| Alkaline Phosphatase | U/l | 145 | 123 | 167 | 11.00 | 22.00 | Siemens Dimension AMP buffer 37°C |
| | U/l | 151 | 128 | 174 | 11.50 | 23.00 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 41 | 33 | 49 | 4.00 | 8.00 | Tris buffer with P5P 37°C |
| | U/l | 42 | 34 | 50 | 4.00 | 8.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total | U/l | 101 | 86 | 116 | 7.50 | 15.00 | Siemens 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 51 | 41 | 61 | 5.00 | 10.00 | Tris buffer with P5P 37°C |
| | U/l | 51 | 41 | 61 | 5.00 | 10.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate | mmol/l | 15.9 | 12.6 | 19.2 | 1.65 | 3.30 | Enzymatic |
| Bilirubin Direct | µmol/l | 12.8 | 10.1 | 15.5 | 1.35 | 2.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 0.749 | 0.591 | 0.907 | 0.08 | 0.16 | |
| Bilirubin Total | µmol/l | 26.9 | 21.2 | 32.6 | 2.85 | 5.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.57 | 1.24 | 1.90 | 0.17 | 0.33 | |
| Calcium | mmol/l | 2.07 | 1.86 | 2.28 | 0.11 | 0.21 | Cresolphthalein complexone |
| | mg/dl | 8.30 | 7.45 | 9.15 | 0.43 | 0.85 | |
| Chloride | mmol/l | 99.0 | 91.1 | 107 | 3.95 | 7.90 | ISE indirect |
| Cholesterol | mmol/l | 3.74 | 3.25 | 4.23 | 0.25 | 0.49 | Dimension-Siemens reagents |
| | mg/dl | 144 | 125 | 163 | 9.50 | 19.00 | |
| CK Total | U/l | 199 | 164 | 234 | 17.50 | 35.00 | CK-NAC (IFCC) 37°C |
| | U/l | 190 | 156 | 224 | 17.00 | 34.00 | Dithioerythritol (DTE) IFCC correlated 37°C |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Creatinine | µmol/l | 137 | 110 | 164 | 13.50 | 27.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.55 | 1.24 | 1.86 | 0.16 | 0.31 | |
| | µmol/l | 130 | 104 | 156 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.47 | 1.18 | 1.76 | 0.15 | 0.29 | |
| | µmol/l | 139 | 111 | 167 | 14.00 | 28.00 | IDMS traceable |
| | mg/dl | 1.57 | 1.25 | 1.89 | 0.16 | 0.32 | |
| gamma-GT | U/l | 57 | 49 | 65 | 4.00 | 8.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 67 | 57 | 77 | 5.00 | 10.00 | Siemens Dimension (non IFCC) 37°C |
| Glucose | mmol/l | 6.20 | 5.27 | 7.13 | 0.47 | 0.93 | Hexokinase |
| | mg/dl | 112 | 95.0 | 129 | 8.50 | 17.00 | |
| HDL - Cholesterol | mmol/l | 1.74 | 1.48 | 2.00 | 0.13 | 0.26 | Direct HDL PPD |
| | mg/dl | 67.2 | 57.1 | 77.3 | 5.05 | 10.10 | |
| | mmol/l | 1.74 | 1.48 | 2.00 | 0.13 | 0.26 | Direct HDL PEGME |
| | mg/dl | 67.2 | 57.1 | 77.3 | 5.05 | 10.10 | |
| Iron | µmol/l | 18.1 | 14.9 | 21.3 | 1.60 | 3.20 | Colorimetric with ppt. |
| | µg/dl | 101 | 83.3 | 119 | 8.85 | 17.70 | |
| | µmol/l | 18.0 | 14.8 | 21.2 | 1.60 | 3.20 | Colorimetric without ppt. |
| | µg/dl | 101 | 82.7 | 119 | 9.15 | 18.30 | |
| LD (LDH) | U/l | 183 | 156 | 210 | 13.50 | 27.00 | Siemens Dimension L-P Non IFCC 37°C |
| | U/l | 178 | 151 | 205 | 13.50 | 27.00 | L->P IFCC 37°C |
| Lipase | U/l | 144 | 116 | 172 | 14.00 | 28.00 | Colorimetric Siemens Dimension (LIPL Kit) 37°C |
| Magnesium | mmol/l | 0.89 | 0.78 | 1.00 | 0.05 | 0.11 | Methylthymol blue |
| | mg/dl | 2.17 | 1.91 | 2.43 | 0.13 | 0.26 | |
| Phosphate Inorganic | mmol/l | 1.54 | 1.31 | 1.77 | 0.12 | 0.23 | Phosphomolybdate UV |
| | mg/dl | 4.77 | 4.06 | 5.48 | 0.36 | 0.71 | |



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## SIEMENS DIMENSION EXL®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Potassium | mmol/l | 4.10 | 3.77 | 4.43 | 0.17 | 0.33 | ISE method - indirect |
| Protein Total | g/l | 61.6 | 49.3 | 73.9 | 6.15 | 12.30 | Biuret reaction end point |
| | g/dl | 6.16 | 4.93 | 7.39 | 0.62 | 1.23 | |
| Sodium | mmol/l | 145 | 138 | 152 | 3.50 | 7.00 | ISE method - indirect |
| TIBC | µmol/l | 45.4 | 35.8 | 55.0 | 4.80 | 9.60 | Removal of excess free iron |
| | µg/dl | 254 | 200 | 308 | 27.00 | 54.00 | |
| Triglycerides | mmol/l | 1.04 | 0.87 | 1.21 | 0.08 | 0.17 | Lipase/GPO-PAP no correction |
| | mg/dl | 92.0 | 77.1 | 107 | 7.45 | 14.90 | |
| | mmol/l | 1.05 | 0.88 | 1.22 | 0.09 | 0.17 | L/G Kinase EP. no correction |
| | mg/dl | 92.9 | 77.7 | 108 | 7.60 | 15.20 | |
| | mmol/l | 1.05 | 0.88 | 1.22 | 0.08 | 0.17 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 92.9 | 78.0 | 108 | 7.45 | 14.90 | |
| Urea | mmol/l | 7.14 | 6.07 | 8.21 | 0.54 | 1.07 | Urease kinetic |
| | mg/dl | 42.9 | 36.5 | 49.3 | 3.20 | 6.40 | |
| | mmol/l | 7.14 | 6.07 | 8.21 | 0.54 | 1.07 | BUN |
| | mg/dl | 20.0 | 17.0 | 23.0 | 1.50 | 3.00 | |
| Uric Acid (Urate) | mmol/l | 0.33 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.58 | 4.86 | 6.30 | 0.36 | 0.72 | |
| | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Spectrophotometric at 280-290 |
| | mg/dl | 5.63 | 4.91 | 6.35 | 0.36 | 0.72 | |



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## SIEMENS DIMENSION RxL/Max/Xpand®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Albumin | g/l | 42.8 | 36.4 | 49.2 | 3.20 | 6.40 | Bromocresol Green |
| | g/dl | 4.28 | 3.64 | 4.92 | 0.32 | 0.64 | |
| | g/l | 45.0 | 38.2 | 51.8 | 3.40 | 6.80 | Bromocresol Purple |
| | g/dl | 4.50 | 3.82 | 5.18 | 0.34 | 0.68 | |
| Alkaline Phosphatase | U/l | 147 | 125 | 169 | 11.00 | 22.00 | Siemens Dimension AMP buffer 37°C |
| | U/l | 143 | 121 | 165 | 11.00 | 22.00 | AMP optimised to IFCC 37°C |
| | U/l | 178 | 151 | 205 | 13.50 | 27.00 | Randox AMP 37°C |
| ALT (GPT) | U/l | 41 | 33 | 49 | 4.00 | 8.00 | Tris buffer with P5P 37°C |
| | U/l | 41 | 33 | 49 | 4.00 | 8.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total | U/l | 100 | 85 | 115 | 7.50 | 15.00 | Siemens 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 51 | 41 | 61 | 5.00 | 10.00 | Tris buffer with P5P 37°C |
| | U/l | 52 | 41 | 63 | 5.50 | 11.00 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate | mmol/l | 17.4 | 13.8 | 21.0 | 1.80 | 3.60 | Enzymatic |
| Bilirubin Direct | µmol/l | 12.4 | 9.80 | 15.0 | 1.30 | 2.60 | Diazo with Sulphanilic Acid |
| | mg/dl | 0.725 | 0.573 | 0.877 | 0.08 | 0.15 | |
| Bilirubin Total | µmol/l | 27.0 | 21.3 | 32.7 | 2.85 | 5.70 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.58 | 1.25 | 1.91 | 0.17 | 0.33 | |
| Calcium | mmol/l | 2.06 | 1.85 | 2.27 | 0.11 | 0.21 | Cresolphthalein complexone |
| | mg/dl | 8.26 | 7.41 | 9.11 | 0.43 | 0.85 | |
| Chloride | mmol/l | 97.8 | 90.0 | 106 | 3.90 | 7.80 | ISE indirect |
| Cholesterol | mmol/l | 3.75 | 3.27 | 4.23 | 0.24 | 0.48 | Dimension-Siemens reagents |
| | mg/dl | 145 | 126 | 164 | 9.50 | 19.00 | |



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## SIEMENS DIMENSION RxL/Max/Xpand®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| CK Total | U/l | 200 | 164 | 236 | 18.00 | 36.00 | CK-NAC (IFCC) 37°C |
| | U/l | 202 | 166 | 238 | 18.00 | 36.00 | Dithioerythritol 37°C |
| Creatinine | µmol/l | 138 | 110 | 166 | 14.00 | 28.00 | Alkaline picrate no deproteinization |
| | mg/dl | 1.56 | 1.24 | 1.88 | 0.16 | 0.32 | |
| | µmol/l | 129 | 103 | 155 | 13.00 | 26.00 | Enzymatic UV method (340nm) |
| | mg/dl | 1.46 | 1.16 | 1.76 | 0.15 | 0.30 | |
| | µmol/l | 134 | 107 | 161 | 13.50 | 27.00 | Jaffe rate blanked |
| | mg/dl | 1.51 | 1.21 | 1.81 | 0.15 | 0.30 | |
| | µmol/l | 136 | 109 | 163 | 13.50 | 27.00 | IDMS traceable |
| | mg/dl | 1.54 | 1.23 | 1.85 | 0.16 | 0.31 | |
| gamma-GT | U/l | 58 | 49 | 67 | 4.50 | 9.00 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 67 | 57 | 77 | 5.00 | 10.00 | Siemens Dimension (non IFCC) 37°C |
| Glucose | mmol/l | 6.23 | 5.30 | 7.16 | 0.47 | 0.93 | Hexokinase |
| | mg/dl | 112 | 95.5 | 129 | 8.25 | 16.50 | |
| HDL - Cholesterol | mmol/l | 1.78 | 1.51 | 2.05 | 0.14 | 0.27 | Direct HDL PPD |
| | mg/dl | 68.7 | 58.3 | 79.1 | 5.20 | 10.40 | |
| | mmol/l | 1.79 | 1.52 | 2.06 | 0.14 | 0.27 | Direct HDL PEGME |
| | mg/dl | 69.1 | 58.7 | 79.5 | 5.20 | 10.40 | |
| | mmol/l | 1.56 | 1.33 | 1.79 | 0.12 | 0.23 | Direct Clearance Method |
| | mg/dl | 60.2 | 51.3 | 69.1 | 4.45 | 8.90 | |
| Iron | µmol/l | 17.7 | 14.5 | 20.9 | 1.60 | 3.20 | Colorimetric without ppt. |
| | µg/dl | 98.9 | 81.1 | 117 | 8.90 | 17.80 | |
| LD (LDH) | U/l | 180 | 153 | 207 | 13.50 | 27.00 | Siemens Dimension L-P Non IFCC 37°C |
| | U/l | 182 | 155 | 209 | 13.50 | 27.00 | L->P IFCC 37°C |



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## SIEMENS DIMENSION RxL/Max/Xpand®

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

**Lot. No. 1180UN Cat. No. HN1530 / HS2611**

**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| | | | Range | | | | |
|---|---|---|---|---|---|---|---|
| **Analyte** | **unit** | **Target** | **low** | **high** | **1SD** | **2SD** | **methods** |
| Lipase | U/l | 138 | 111 | 165 | 13.50 | 27.00 | Colorimetric Siemens Dimension (LIPL Kit) 37°C |
| Magnesium | mmol/l | 0.89 | 0.78 | 1.00 | 0.05 | 0.11 | Methylthymol blue |
| | mg/dl | 2.16 | 1.90 | 2.42 | 0.13 | 0.26 | |
| Phosphate Inorganic | mmol/l | 1.54 | 1.31 | 1.77 | 0.12 | 0.23 | Phosphomolybdate UV |
| | mg/dl | 4.77 | 4.06 | 5.48 | 0.36 | 0.71 | |
| Potassium | mmol/l | 4.04 | 3.72 | 4.36 | 0.16 | 0.32 | ISE method - indirect |
| Protein Total | g/l | 61.5 | 49.2 | 73.8 | 6.15 | 12.30 | Biuret reaction end point |
| | g/dl | 6.15 | 4.92 | 7.38 | 0.62 | 1.23 | |
| Sodium | mmol/l | 144 | 137 | 151 | 3.50 | 7.00 | ISE method - indirect |
| TIBC | µmol/l | 43.0 | 33.9 | 52.1 | 4.55 | 9.10 | Removal of excess free iron |
| | µg/dl | 240 | 190 | 290 | 25.00 | 50.00 | |
| Triglycerides | mmol/l | 1.07 | 0.90 | 1.24 | 0.09 | 0.17 | Lipase/GPO-PAP no correction |
| | mg/dl | 94.7 | 79.6 | 110 | 7.55 | 15.10 | |
| | mmol/l | 1.02 | 0.86 | 1.18 | 0.08 | 0.16 | L/G Kinase EP. no correction |
| | mg/dl | 90.3 | 76.1 | 105 | 7.10 | 14.20 | |
| | mmol/l | 1.06 | 0.89 | 1.23 | 0.09 | 0.17 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 93.8 | 78.8 | 109 | 7.50 | 15.00 | |
| Urea | mmol/l | 7.17 | 6.09 | 8.25 | 0.54 | 1.08 | Urease end point |
| | mg/dl | 43.1 | 36.6 | 49.6 | 3.25 | 6.50 | |
| | mmol/l | 7.26 | 6.17 | 8.35 | 0.55 | 1.09 | Urease kinetic |
| | mg/dl | 43.6 | 37.1 | 50.1 | 3.25 | 6.50 | |
| | mmol/l | 7.26 | 6.17 | 8.35 | 0.55 | 1.09 | BUN |
| | mg/dl | 20.4 | 17.3 | 23.5 | 1.55 | 3.10 | |
| Uric Acid (Urate) | mmol/l | 0.34 | 0.29 | 0.38 | 0.02 | 0.04 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 5.63 | 4.91 | 6.35 | 0.36 | 0.72 | |



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**Size 20 x 5ml / 5 x 5ml Expiry 2020-12-28**

| Analyte | unit | Target | Range low | Range high | 1SD | 2SD | methods |
|---|---|---|---|---|---|---|---|
| Uric Acid (Urate) | mmol/l | 0.33 | 0.29 | 0.38 | 0.02 | 0.04 | Spectrophotometric at 280-290 |
| | mg/dl | 5.58 | 4.86 | 6.30 | 0.36 | 0.72 | |



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