# CALIBRATION SERUM LEVEL 3 (CAL 3)

**CAT. NO.** CAL 2351 **LOT NO.** 997UE
**SIZE:** 20 x 5ml **EXPIRY:** 2020-07-28

**GTIN:** 05055273200966

## INTENDED USE

For use as a Calibrator in clinical chemistry assays. RANDOX Calibration Sera are based on lyophilised human serum.
The concentrations and activities are suitable for calibration of clinical chemistry assays on a wide range of automatic analysers.
Constituent concentrations are available at 2 levels.

## SAFETY PRECAUTIONS AND WARNINGS

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.
For *in vitro* diagnostic use only.

## STORAGE AND STABILITY

Unreconstituted serum is stable up to the expiry date shown on the side of each individual bottle. Once reconstituted, the components of the Calibration Sera are stable for 8 hours at +15°C to +25°C, 7 days at +2°C to +8°C, and 28 days at –20°C when frozen once (see limitations).

## PREPARATION FOR USE

Serum must only be reconstituted using the following procedure:

1. Open the vial carefully, avoiding any loss of material.
2. Reconstitute by pipetting exactly 5 ml of distilled water at +15°C to +25°C, into the vial.
3. Replace the rubber stopper and leave to stand for 30 minutes out of bright light before use.
4. Swirl gently several times during the reconstitution period to ensure that the contents are completely dissolved.
5. Prior to use, mix the contents by inverting the vial. Do not shake the vial as the formation of foam should be avoided. Ensure that no lyophilised material remains unreconstituted.
6. The serum is then ready for use with either a manual test or with an automated instrument.

## MATERIALS PROVIDED

Calibration Serum - Level 3
Cat No. CAL 2351 20 x 5ml

## MATERIALS REQUIRED BUT NOT PROVIDED

Calibrated pipette, double deionised water.

## LIMITATIONS

After reconstitution, Bicarbonate is stable for 8 hours in the closed bottle and 1 hour in the open bottle.
For Total and Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25 µl - 30 µl) of 0.7M Acetic acid solution to 1 ml of the serum exactly 30 minutes after reconstitution. After stabilisation, Total & Prostatic Acid Phosphatase are 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 –20°C.
Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum be 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 1 day at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components. Different lot numbers of this calibrator should not be interchanged, as the values assigned to the calibrators vary from lot to lot.

## VALUE ASSIGNMENT

Each batch of serum is distributed to approximately 3000 laboratories worldwide and values are assigned by a consensus of results obtained by these laboratories. The Calibration values for each instrument have been determined in at least 10 independent laboratories. Values are verified against a master lot of calibrator, which is traceable to reference methods or reference materials. In some cases, values may be assigned at Randox Laboratories in comparison to a master lot of calibrator, which is traceable to reference methods or reference materials.

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

® All trademarks recognised.

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

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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Abbott Architect c/ci Systems®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 28.2 | Bromocresol Green |
| | g/dl | 2.82 | |
| | g/l | 27.1 | Bromocresol Purple |
| | g/dl | 2.71 | |
| Alkaline Phosphatase | U/l | 306 | AMP optimised to IFCC 37°C |
| | U/l | 306 | AMP non-optimised 37°C |
| ALT (GPT) | U/l | 155 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 275 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 338 | Abbott Architect Non-IFCC Cal. 37°C |
| | U/l | 378 | Abbott Architect IFCC Cal. 37°C |
| AST (GOT) | U/l | 140 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 15.7 | Enzymatic |
| Bile Acids | µmol/l | 44.3 | Enzymatic Colorimetric |
| Bilirubin Direct | µmol/l | 30.3 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.77 | |
| | µmol/l | 30.0 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.75 | |
| | µmol/l | 30.1 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.76 | |
| Bilirubin Total | µmol/l | 79.6 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.66 | |
| | µmol/l | 81.7 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.78 | |
| | µmol/l | 83.4 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.88 | |
| | µmol/l | 78.5 | Diazonium ion |
| | mg/dl | 4.59 | |
| Calcium | mmol/l | 3.04 | Arsenazo III |
| | mg/dl | 12.2 | |
| Chloride | mmol/l | 117 | ISE indirect |
| Cholesterol | mmol/l | 7.08 | Cholesterol Oxidase |
| | mg/dl | 273 | |
| Cholinesterase | U/l | 6106 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 542 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 414 | Alkaline picrate no deproteinization |
| | mg/dl | 4.68 | |
| | µmol/l | 400 | Enzymatic UV method |
| | mg/dl | 4.52 | |
| | µmol/l | 400 | Creatinine PAP method |
| | mg/dl | 4.52 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Abbott Architect c/ci Systems®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Creatinine | µmol/l | 414 | Jaffe rate blanked |
| | mg/dl | 4.67 | |
| | µmol/l | 414 | IDMS traceable |
| | mg/dl | 4.68 | |
| gamma-GT | U/l | 175 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 173 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 15.7 | Hexokinase |
| | mg/dl | 283 | |
| | mmol/l | 15.8 | Glucose oxidase |
| | mg/dl | 285 | |
| Iron | µmol/l | 38.8 | Colorimetric with ppt. |
| | µg/dl | 217 | |
| | µmol/l | 39.0 | Colorimetric without ppt. |
| | µg/dl | 218 | |
| Lactate | mmol/l | 6.02 | Colorimetric Lactate Oxidase |
| | mg/dl | 54.2 | |
| LD (LDH) | U/l | 373 | L->P 37°C |
| | U/l | 369 | L->P IFCC 37°C |
| Lipase | U/l | 64 | Other Colorimetric 37°C |
| Lithium | mmol/l | 2.03 | Spectrophotometric |
| | mg/dl | 1.41 | |
| Magnesium | mmol/l | 1.72 | Arsenazo III |
| | mg/dl | 4.18 | |
| | mmol/l | 1.74 | Enzymatic |
| | mg/dl | 4.23 | |
| Phosphate Inorganic | mmol/l | 2.15 | Phosphomolybdate enzymatic |
| | mg/dl | 6.67 | |
| | mmol/l | 2.16 | Phosphomolybdate UV |
| | mg/dl | 6.70 | |
| Potassium | mmol/l | 6.26 | ISE method - indirect |
| Protein Total | g/l | 45.4 | Biuret reaction end point |
| | g/dl | 4.54 | |
| Sodium | mmol/l | 160 | ISE method - indirect |
| TIBC | µmol/l | 49.4 | FE+UIBC(saturation with iron) |
| | µg/dl | 276 | |
| Triglycerides | mmol/l | 2.84 | Lipase/GPO-PAP no correction |
| | mg/dl | 251 | |
| | mmol/l | 2.88 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 255 | |
| | mmol/l | 2.90 | L/G Kinase EP. no correction |
| | mg/dl | 257 | |
| | mmol/l | 2.89 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 256 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Abbott Architect c/ci Systems®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| UIBC | µmol/l | 10.5 | Direct Colorimetric |
| | µg/dl | 58.9 | |
| Urea | mmol/l | 21.4 | Urease end point |
| | mg/dl | 129 | |
| | mmol/l | 21.7 | Urease kinetic |
| | mg/dl | 130 | |
| | mmol/l | 21.7 | BUN |
| | mg/dl | 60.9 | |
| Uric Acid (Urate) | mmol/l | 0.568 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.54 | |
| | mmol/l | 0.569 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.56 | |
| | mmol/l | 0.573 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.63 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Beckman Coulter AU Series®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 27.0 | Bromocresol Green |
| | g/dl | 2.70 | |
| | g/l | 28.5 | Bromocresol Purple |
| | g/dl | 2.85 | |
| Alkaline Phosphatase | U/l | 375 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 161 | Tris buffer without P5P 37°C |
| Amylase Total | U/l | 305 | pNP Maltotrioside substrates 37°C |
| | U/l | 304 | Beckman Synchron CX4/CX5/CX7 37°C |
| | U/l | 307 | Beckman Coulter - blocked pNPG7 37°C |
| AST (GOT) | U/l | 154 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 17.1 | Enzymatic |
| Bilirubin Direct | µmol/l | 25.7 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.50 | |
| Bilirubin Total | µmol/l | 81.5 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 4.77 | |
| | µmol/l | 85.9 | Diazo with Sulphanilic Acid |
| | mg/dl | 5.02 | |
| | µmol/l | 81.7 | DPD (Beckman AU) |
| | mg/dl | 4.78 | |
| Calcium | mmol/l | 3.02 | Cresolphthalein complexone |
| | mg/dl | 12.1 | |
| | mmol/l | 3.02 | Arsenazo III |
| | mg/dl | 12.1 | |
| Chloride | mmol/l | 116 | ISE indirect |
| Cholesterol | mmol/l | 7.14 | Cholesterol Oxidase |
| | mg/dl | 276 | |
| Cholinesterase | U/l | 4959 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 579 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 555 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 381 | Alkaline picrate no deproteinization |
| | mg/dl | 4.31 | |
| | µmol/l | 409 | Enzymatic UV method |
| | mg/dl | 4.62 | |
| | µmol/l | 403 | Creatinine PAP method |
| | mg/dl | 4.56 | |
| | µmol/l | 381 | Jaffe rate blanked |
| | mg/dl | 4.31 | |
| | µmol/l | 404 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.57 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Beckman Coulter AU Series®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Creatinine | µmol/l | 389 | IDMS traceable |
| | mg/dl | 4.40 | |
| D-3-Hydroxybutyrate | mmol/l | 1.14 | Tris buffer 100mmol pH 8.5 |
| gamma-GT | U/l | 181 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 150 | Gamma glutamyl-4-nitroanilide 37°C |
| | U/l | 179 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| GLDH | U/l | 31 | Triethanolamine buffer 50 mmol 37°C |
| Glucose | mmol/l | 15.7 | Hexokinase |
| | mg/dl | 283 | |
| | mmol/l | 15.9 | Glucose oxidase |
| | mg/dl | 287 | |
| Iron | µmol/l | 38.5 | Colorimetric with ppt. |
| | µg/dl | 215 | |
| | µmol/l | 38.0 | Colorimetric without ppt. |
| | µg/dl | 212 | |
| Lactate | mmol/l | 5.60 | Colorimetric Lactate Oxidase |
| | mg/dl | 50.5 | |
| LD (LDH) | U/l | 362 | L->P 37°C |
| | U/l | 839 | P->L Scandinavian & Dutch 37°C |
| | U/l | 374 | L->P IFCC 37°C |
| Lipase | U/l | 69 | Other Colorimetric 37°C |
| | U/l | 63 | Roche Colorimetric 37°C |
| | U/l | 92 | Randox Colorimetric 37°C |
| Lithium | mmol/l | 2.03 | Spectrophotometric |
| | mg/dl | 1.41 | |
| Magnesium | mmol/l | 1.78 | Xylidyl Blue |
| | mg/dl | 4.33 | |
| Phosphate Inorganic | mmol/l | 2.21 | Phosphomolybdate UV |
| | mg/dl | 6.85 | |
| Potassium | mmol/l | 6.22 | ISE method - indirect |
| Protein Total | g/l | 44.7 | Biuret reaction end point |
| | g/dl | 4.47 | |
| | g/l | 45.0 | Biuret reaction kinetic |
| | g/dl | 4.50 | |
| Sodium | mmol/l | 160 | ISE method - indirect |
| TIBC | µmol/l | 49.4 | FE+UIBC(saturation with iron) |
| | µg/dl | 276 | |
| Triglycerides | mmol/l | 2.91 | Lipase/GPO-PAP no correction |
| | mg/dl | 258 | |
| | mmol/l | 2.94 | L/G Kinase EP. no correction |
| | mg/dl | 260 | |
| UIBC | µmol/l | 11.8 | Direct Colorimetric |
| | µg/dl | 66.1 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Beckman Coulter AU Series®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Urea | mmol/l | 21.5 | Urease end point |
| | mg/dl | 129 | |
| | mmol/l | 21.4 | Urease kinetic |
| | mg/dl | 129 | |
| | mmol/l | 21.4 | BUN |
| | mg/dl | 60.1 | |
| Uric Acid (Urate) | mmol/l | 0.597 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 10.0 | |
| | mmol/l | 0.594 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.98 | |
| | mmol/l | 0.570 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.58 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Beckman CX4/5/7/9/LX20®/DxC600/800®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 29.7 | Bromocresol Green |
| | g/dl | 2.97 | |
| | g/l | 28.6 | Bromocresol Purple |
| | g/dl | 2.86 | |
| Alkaline Phosphatase | U/l | 334 | AMP optimised to IFCC 37°C |
| | U/l | 324 | AMP non-optimised 37°C |
| ALT (GPT) | U/l | 149 | Tris buffer without P5P 37°C |
| | U/l | 145 | Tris buffer SCE 37°C |
| Amylase Total | U/l | 315 | Beckman Synchron CX4/CX5/CX7 37°C |
| | U/l | 319 | Beckman Synchron AMY7 37°C |
| AST (GOT) | U/l | 138 | Tris buffer without P5P 37°C |
| | U/l | 135 | Tris buffer SCE 37°C |
| Bicarbonate | mmol/l | 16.6 | Differential rate pH change |
| | mmol/l | 17.5 | Ion selective electrode |
| Bilirubin Direct | µmol/l | 17.4 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.02 | |
| Bilirubin Total | µmol/l | 81.6 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.77 | |
| Calcium | mmol/l | 3.02 | Ion selective electrode |
| | mg/dl | 12.1 | |
| | mmol/l | 2.96 | Arsenazo III |
| | mg/dl | 11.9 | |
| Chloride | mmol/l | 117 | ISE indirect |
| Cholesterol | mmol/l | 7.06 | Cholesterol Oxidase |
| | mg/dl | 273 | |
| CK Total | U/l | 548 | CK-NAC (IFCC) 37°C |
| | U/l | 560 | Monothioglycerol 37°C |
| | U/l | 544 | Creatinine phosphate substrate Start 37°C |
| Creatinine | µmol/l | 399 | Alkaline picrate no deproteinization |
| | mg/dl | 4.51 | |
| | µmol/l | 392 | Jaffe rate blanked |
| | mg/dl | 4.43 | |
| | µmol/l | 396 | IDMS traceable |
| | mg/dl | 4.48 | |
| gamma-GT | U/l | 144 | Gamma glutamyl-4-nitroanilide 37°C |
| Glucose | mmol/l | 15.1 | Hexokinase |
| | mg/dl | 273 | |
| | mmol/l | 15.1 | Glucose oxidase |
| | mg/dl | 272 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Beckman CX4/5/7/9/LX20®/DxC600/800® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Iron | µmol/l | 37.3 | Colorimetric without ppt. |
| | µg/dl | 209 | |
| Lactate | mmol/l | 5.22 | Colorimetric Lactate Oxidase |
| | mg/dl | 47.0 | |
| LD (LDH) | U/l | 309 | L->P 37°C |
| Lipase | U/l | 66 | Other Colorimetric 37°C |
| Magnesium | mmol/l | 1.69 | Calmagite |
| | mg/dl | 4.11 | |
| Phosphate Inorganic | mmol/l | 2.23 | Phosphomolybdate enzymatic |
| | mg/dl | 6.91 | |
| | mmol/l | 2.26 | Phosphomolybdate UV |
| | mg/dl | 7.01 | |
| Potassium | mmol/l | 6.22 | ISE method - indirect |
| Protein Total | g/l | 44.1 | Biuret reaction CX4/5/7 |
| | g/dl | 4.41 | |
| | g/l | 44.9 | Biuret reaction end point |
| | g/dl | 4.49 | |
| | g/l | 42.6 | Biuret reaction kinetic |
| | g/dl | 4.26 | |
| Sodium | mmol/l | 159 | ISE method - indirect |
| Triglycerides | mmol/l | 3.05 | Lipase/GPO-PAP no correction |
| | mg/dl | 270 | |
| | mmol/l | 3.05 | L/G Kinase EP. no correction |
| | mg/dl | 270 | |
| Urea | mmol/l | 21.1 | Urease end point |
| | mg/dl | 127 | |
| | mmol/l | 21.7 | Urease kinetic |
| | mg/dl | 130 | |
| | mmol/l | 21.7 | BUN |
| | mg/dl | 60.9 | |
| Uric Acid (Urate) | mmol/l | 0.548 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.21 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**BIOSYSTEMS A15 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 29.0 | Bromocresol Green |
| | g/dl | 2.90 | |
| ALT (GPT) | U/l | 163 | Tris buffer without P5P 37°C |
| | U/l | 121 | Tris buffer without P5P 30°C |
| | U/l | 92 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 155 | Tris buffer without P5P 37°C |
| | U/l | 105 | Tris buffer without P5P 30°C |
| | U/l | 74 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 27.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.63 | |
| Bilirubin Total | µmol/l | 83.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.90 | |
| Cholesterol | mmol/l | 7.26 | Cholesterol Oxidase |
| | mg/dl | 280 | |
| Glucose | mmol/l | 16.1 | Glucose oxidase |
| | mg/dl | 289 | |
| Protein Total | g/l | 45.2 | Biuret reaction end point |
| | g/dl | 4.52 | |
| Triglycerides | mmol/l | 2.81 | Lipase/GPO-PAP no correction |
| | mg/dl | 249 | |
| Uric Acid (Urate) | mmol/l | 0.548 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.21 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**BIOSYSTEMS A25 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 29.5 | Bromocresol Green |
| | g/dl | 2.95 | |
| Alkaline Phosphatase | U/l | 303 | AMP optimised to IFCC 37°C |
| | U/l | 236 | AMP optimised to IFCC 30°C |
| | U/l | 194 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 156 | Tris buffer without P5P 37°C |
| | U/l | 115 | Tris buffer without P5P 30°C |
| | U/l | 88 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 155 | Tris buffer without P5P 37°C |
| | U/l | 105 | Tris buffer without P5P 30°C |
| | U/l | 74 | Tris buffer without P5P 25°C |
| Bilirubin Total | µmol/l | 80.5 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.71 | |
| Cholesterol | mmol/l | 7.14 | Cholesterol Oxidase |
| | mg/dl | 276 | |
| Glucose | mmol/l | 15.9 | Glucose oxidase |
| | mg/dl | 287 | |
| Phosphate Inorganic | mmol/l | 2.30 | Phosphomolybdate UV |
| | mg/dl | 7.13 | |
| Protein Total | g/l | 45.5 | Biuret reaction end point |
| | g/dl | 4.55 | |
| Triglycerides | mmol/l | 2.97 | Lipase/GPO-PAP no correction |
| | mg/dl | 263 | |
| Urea | mmol/l | 20.4 | Urease kinetic |
| | mg/dl | 123 | |
| | mmol/l | 20.4 | BUN |
| | mg/dl | 57.3 | |
| Uric Acid (Urate) | mmol/l | 0.599 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 10.1 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Biotechnica/Wiener BT and CB Series Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 28.6 | Bromocresol Green |
| | g/dl | 2.86 | |
| Alkaline Phosphatase | U/l | 402 | Diethanolamine buffer DEA 37°C |
| | U/l | 313 | Diethanolamine buffer DEA 30°C |
| | U/l | 257 | Diethanolamine buffer DEA 25°C |
| ALT (GPT) | U/l | 159 | Tris buffer without P5P 37°C |
| | U/l | 118 | Tris buffer without P5P 30°C |
| | U/l | 90 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 147 | Tris buffer without P5P 37°C |
| | U/l | 99 | Tris buffer without P5P 30°C |
| | U/l | 70 | Tris buffer without P5P 25°C |
| Cholesterol | mmol/l | 6.97 | Cholesterol Oxidase |
| | mg/dl | 269 | |
| Creatinine | µmol/l | 348 | Alkaline picrate no deproteinization |
| | mg/dl | 3.93 | |
| Glucose | mmol/l | 14.8 | Glucose oxidase |
| | mg/dl | 267 | |
| Triglycerides | mmol/l | 2.70 | Lipase/GPO-PAP no correction |
| | mg/dl | 239 | |
| Urea | mmol/l | 20.4 | Urease kinetic |
| | mg/dl | 123 | |
| | mmol/l | 20.4 | BUN |
| | mg/dl | 57.3 | |
| Uric Acid (Urate) | mmol/l | 0.547 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.19 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**COBAS INTEGRA® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 30.2 | Bromocresol Green |
| | g/dl | 3.02 | |
| | g/l | 26.6 | Turbidimetric Assays |
| | g/dl | 2.66 | |
| Alkaline Phosphatase | U/l | 278 | Roche Integra AMP buffer 37°C |
| | U/l | 217 | Roche Integra AMP buffer 30°C |
| | U/l | 178 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 148 | Tris buffer without P5P 37°C |
| | U/l | 110 | Tris buffer without P5P 30°C |
| | U/l | 83 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 277 | Roche EPS Liquid 37°C |
| Amylase Total | U/l | 299 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 297 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 143 | Tris buffer without P5P 37°C |
| | U/l | 97 | Tris buffer without P5P 30°C |
| | U/l | 68 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 16.7 | Colorimetric |
| | mmol/l | 17.0 | Enzymatic |
| Bilirubin Direct | µmol/l | 30.1 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.76 | |
| | µmol/l | 30.1 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.76 | |
| | µmol/l | 30.4 | Roche JG factored |
| | mg/dl | 1.78 | |
| Bilirubin Total | µmol/l | 73.9 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.32 | |
| | µmol/l | 72.2 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.23 | |
| | µmol/l | 72.6 | Diazonium ion |
| | mg/dl | 4.25 | |
| Calcium | mmol/l | 3.09 | Cresolphthalein complexone |
| | mg/dl | 12.4 | |
| | mmol/l | 3.09 | NM-BAPTA |
| | mg/dl | 12.4 | |
| Chloride | mmol/l | 118 | ISE indirect |
| Cholesterol | mmol/l | 6.98 | Cholesterol Oxidase |
| | mg/dl | 269 | |
| CK Total | U/l | 515 | CK-NAC (IFCC) 37°C |
| | U/l | 322 | CK-NAC (IFCC) 30°C |
| | U/l | 219 | CK-NAC (IFCC) 25°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**COBAS INTEGRA® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Creatinine | µmol/l | 396 | Alkaline picrate no deproteinization |
| | mg/dl | 4.47 | |
| | µmol/l | 400 | Roche Creatinine Plus |
| | mg/dl | 4.52 | |
| | µmol/l | 424 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.79 | |
| | µmol/l | 406 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.59 | |
| gamma-GT | U/l | 166 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 131 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 102 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 181 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 143 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 112 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.7 | Hexokinase |
| | mg/dl | 283 | |
| Iron | µmol/l | 38.1 | Colorimetric with ppt. |
| | µg/dl | 213 | |
| | µmol/l | 37.9 | Colorimetric without ppt. |
| | µg/dl | 212 | |
| Lactate | mmol/l | 5.84 | Colorimetric Lactate Oxidase |
| | mg/dl | 52.6 | |
| LD (LDH) | U/l | 714 | P->L German methods 37°C |
| | U/l | 516 | P->L German methods 30°C |
| | U/l | 362 | P->L German methods 25°C |
| | U/l | 395 | L->P IFCC 37°C |
| | U/l | 285 | L->P IFCC 30°C |
| | U/l | 200 | L->P IFCC 25°C |
| Lipase | U/l | 72 | Roche Colorimetric 37°C |
| Lithium | mmol/l | 2.13 | Ion selective electrode |
| | mg/dl | 1.48 | |
| Magnesium | mmol/l | 1.78 | Chlorphosphonazo III |
| | mg/dl | 4.33 | |
| Phosphate Inorganic | mmol/l | 2.27 | Phosphomolybdate enzymatic |
| | mg/dl | 7.04 | |
| | mmol/l | 2.29 | Phosphomolybdate UV |
| | mg/dl | 7.10 | |
| Potassium | mmol/l | 6.29 | ISE method - indirect |
| Protein Total | g/l | 43.0 | Biuret reaction end point |
| | g/dl | 4.30 | |
| | g/l | 43.1 | Biuret reaction kinetic |
| | g/dl | 4.31 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**COBAS INTEGRA® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Sodium | mmol/l | 161 | ISE method - indirect |
| TIBC | µmol/l | 47.8 | FE+UIBC(saturation with iron) |
| | µg/dl | 267 | |
| Triglycerides | mmol/l | 2.92 | Lipase/GPO-PAP no correction |
| | mg/dl | 258 | |
| | mmol/l | 2.83 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 250 | |
| | mmol/l | 2.85 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 252 | |
| Urea | mmol/l | 20.8 | Urease kinetic |
| | mg/dl | 125 | |
| | mmol/l | 20.8 | BUN |
| | mg/dl | 58.4 | |
| Uric Acid (Urate) | mmol/l | 0.575 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.66 | |
| | mmol/l | 0.574 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.64 | |
| | mmol/l | 0.575 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.66 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Elitech/Vitalab Selectra Series Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 31.0 | Bromocresol Green |
| | g/dl | 3.10 | |
| Alkaline Phosphatase | U/l | 467 | Diethanolamine buffer DEA 37°C |
| ALT (GPT) | U/l | 161 | Tris buffer without P5P 37°C |
| AST (GOT) | U/l | 142 | Tris buffer without P5P 37°C |
| Calcium | mmol/l | 3.12 | Arsenazo III |
| | mg/dl | 12.5 | |
| Cholesterol | mmol/l | 7.33 | Cholesterol Oxidase |
| | mg/dl | 283 | |
| Creatinine | µmol/l | 389 | Alkaline picrate no deproteinization |
| | mg/dl | 4.39 | |
| Glucose | mmol/l | 15.9 | Glucose oxidase |
| | mg/dl | 286 | |
| Phosphate Inorganic | mmol/l | 2.15 | Phosphomolybdate UV |
| | mg/dl | 6.67 | |
| Protein Total | g/l | 48.5 | Biuret reaction end point |
| | g/dl | 4.85 | |
| Triglycerides | mmol/l | 2.81 | Lipase/GPO-PAP no correction |
| | mg/dl | 249 | |
| Urea | mmol/l | 20.9 | Urease kinetic |
| | mg/dl | 126 | |
| | mmol/l | 20.9 | BUN |
| | mg/dl | 58.7 | |
| Uric Acid (Urate) | mmol/l | 0.543 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.12 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**HITACHI SERIES® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 30.0 | Bromocresol Green |
| | g/dl | 3.00 | |
| Alkaline Phosphatase | U/l | 257 | Roche Integra AMP buffer 37°C |
| | U/l | 200 | Roche Integra AMP buffer 30°C |
| | U/l | 164 | Roche Integra AMP buffer 25°C |
| | U/l | 319 | Randox AMP 37°C |
| | U/l | 249 | Randox AMP 30°C |
| | U/l | 204 | Randox AMP 25°C |
| ALT (GPT) | U/l | 148 | Tris buffer without P5P 37°C |
| | U/l | 110 | Tris buffer without P5P 30°C |
| | U/l | 83 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 303 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 284 | Roche liquid stable pNPG7 37°C |
| | U/l | 323 | Randox Liquid Ethylidene pNPG7 37°C |
| AST (GOT) | U/l | 135 | Tris buffer without P5P 37°C |
| | U/l | 91 | Tris buffer without P5P 30°C |
| | U/l | 64 | Tris buffer without P5P 25°C |
| Bile Acids | µmol/l | 45.3 | 5th Generation Colorimetric |
| Bilirubin Total | µmol/l | 74.3 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.35 | |
| Calcium | mmol/l | 3.07 | Cresolphthalein complexone |
| | mg/dl | 12.3 | |
| | mmol/l | 3.06 | NM-BAPTA |
| | mg/dl | 12.3 | |
| Chloride | mmol/l | 114 | ISE indirect |
| Cholesterol | mmol/l | 6.91 | Cholesterol Oxidase |
| | mg/dl | 267 | |
| CK Total | U/l | 505 | CK-NAC (IFCC) 37°C |
| | U/l | 316 | CK-NAC (IFCC) 30°C |
| | U/l | 215 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 393 | Roche Creatinine Plus |
| | mg/dl | 4.44 | |
| | µmol/l | 427 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.83 | |
| D-3-Hydroxybutyrate | mmol/l | 1.18 | Tris buffer 100mmol pH 8.5 |
| gamma-GT | U/l | 158 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 125 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 97 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 189 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 149 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 117 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**HITACHI SERIES® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| GLDH | U/l | 32 | Triethanolamine buffer 50 mmol 37°C |
| | U/l | 25 | Triethanolamine buffer 50 mmol 30°C |
| | U/l | 20 | Triethanolamine buffer 50 mmol 25°C |
| Glucose | mmol/l | 15.6 | Hexokinase |
| | mg/dl | 280 | |
| LD (LDH) | U/l | 385 | L->P IFCC 37°C |
| | U/l | 278 | L->P IFCC 30°C |
| | U/l | 195 | L->P IFCC 25°C |
| Lipase | U/l | 63 | Roche Colorimetric 37°C |
| Magnesium | mmol/l | 1.74 | Xylidyl Blue |
| | mg/dl | 4.23 | |
| Phosphate Inorganic | mmol/l | 2.19 | Phosphomolybdate UV |
| | mg/dl | 6.79 | |
| Potassium | mmol/l | 6.37 | ISE method - indirect |
| Protein Total | g/l | 44.6 | Biuret reaction end point |
| | g/dl | 4.46 | |
| Sodium | mmol/l | 162 | ISE method - indirect |
| Triglycerides | mmol/l | 2.94 | Lipase/GPO-PAP no correction |
| | mg/dl | 260 | |
| Urea | mmol/l | 21.6 | Urease kinetic |
| | mg/dl | 130 | |
| | mmol/l | 21.6 | BUN |
| | mg/dl | 60.6 | |
| Uric Acid (Urate) | mmol/l | 0.554 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.31 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**ILab 600®/650®/Aries/Taurus Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 29.1 | Bromocresol Green |
| | g/dl | 2.91 | |
| Alkaline Phosphatase | U/l | 336 | AMP optimised to IFCC 37°C |
| | U/l | 262 | AMP optimised to IFCC 30°C |
| | U/l | 215 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 144 | Tris buffer without P5P 37°C |
| | U/l | 107 | Tris buffer without P5P 30°C |
| | U/l | 81 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 140 | Tris buffer without P5P 37°C |
| | U/l | 95 | Tris buffer without P5P 30°C |
| | U/l | 67 | Tris buffer without P5P 25°C |
| Bilirubin Total | µmol/l | 82.9 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.85 | |
| Calcium | mmol/l | 3.18 | Cresolphthalein complexone |
| | mg/dl | 12.7 | |
| Cholesterol | mmol/l | 7.16 | Cholesterol Oxidase |
| | mg/dl | 276 | |
| CK Total | U/l | 493 | CK-NAC (IFCC) 37°C |
| | U/l | 309 | CK-NAC (IFCC) 30°C |
| | U/l | 210 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 372 | Alkaline picrate no deproteinization |
| | mg/dl | 4.20 | |
| gamma-GT | U/l | 167 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 132 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 103 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 14.6 | Glucose oxidase |
| | mg/dl | 263 | |
| Phosphate Inorganic | mmol/l | 2.25 | Phosphomolybdate UV |
| | mg/dl | 6.98 | |
| Protein Total | g/l | 45.9 | Biuret reaction end point |
| | g/dl | 4.59 | |
| Triglycerides | mmol/l | 2.90 | Lipase/GPO-PAP no correction |
| | mg/dl | 257 | |
| Urea | mmol/l | 21.8 | Urease end point |
| | mg/dl | 131 | |
| | mmol/l | 21.8 | BUN |
| | mg/dl | 61.2 | |
| Uric Acid (Urate) | mmol/l | 0.545 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.16 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Konelab 20/30/60®/Thermo Scientific Indiko Plus®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 28.9 | Bromocresol Green |
| | g/dl | 2.89 | |
| Alkaline Phosphatase | U/l | 453 | Diethanolamine buffer DEA 37°C |
| | U/l | 353 | Diethanolamine buffer DEA 30°C |
| | U/l | 289 | Diethanolamine buffer DEA 25°C |
| | U/l | 318 | AMP optimised to IFCC 37°C |
| | U/l | 248 | AMP optimised to IFCC 30°C |
| | U/l | 203 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 170 | Tris buffer without P5P 37°C |
| | U/l | 126 | Tris buffer without P5P 30°C |
| | U/l | 96 | Tris buffer without P5P 25°C |
| AST (GOT) | U/l | 162 | Tris buffer without P5P 37°C |
| | U/l | 110 | Tris buffer without P5P 30°C |
| | U/l | 77 | Tris buffer without P5P 25°C |
| Bile Acids | µmol/l | 45.6 | Enzymatic Colorimetric |
| Bilirubin Direct | µmol/l | 30.0 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.75 | |
| Bilirubin Total | µmol/l | 74.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.37 | |
| | µmol/l | 75.6 | Nitrobenzenediazonium salt |
| | mg/dl | 4.42 | |
| Calcium | mmol/l | 3.14 | Arsenazo III |
| | mg/dl | 12.6 | |
| Chloride | mmol/l | 118 | ISE direct |
| Cholesterol | mmol/l | 7.10 | Cholesterol Oxidase |
| | mg/dl | 274 | |
| CK Total | U/l | 533 | CK-NAC (IFCC) 37°C |
| | U/l | 334 | CK-NAC (IFCC) 30°C |
| | U/l | 227 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 393 | Alkaline picrate no deproteinization |
| | mg/dl | 4.44 | |
| gamma-GT | U/l | 178 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 140 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 110 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 16.1 | Hexokinase |
| | mg/dl | 290 | |
| | mmol/l | 15.7 | Glucose oxidase |
| | mg/dl | 283 | |
| Iron | µmol/l | 39.3 | Colorimetric without ppt. |
| | µg/dl | 220 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Konelab 20/30/60®/Thermo Scientific Indiko Plus®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Magnesium | mmol/l | 1.71 | Xylidyl Blue |
| | mg/dl | 4.16 | |
| Phosphate Inorganic | mmol/l | 2.30 | Phosphomolybdate UV |
| | mg/dl | 7.13 | |
| Potassium | mmol/l | 6.15 | ISE method - direct |
| Protein Total | g/l | 46.4 | Biuret reaction end point |
| | g/dl | 4.64 | |
| Sodium | mmol/l | 157 | ISE method - direct |
| Triglycerides | mmol/l | 2.96 | Lipase/GPO-PAP no correction |
| | mg/dl | 262 | |
| Urea | mmol/l | 20.4 | Urease kinetic |
| | mg/dl | 123 | |
| | mmol/l | 20.4 | BUN |
| | mg/dl | 57.3 | |
| Uric Acid (Urate) | mmol/l | 0.584 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.81 | |
| | mmol/l | 0.576 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.68 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**MEAN OF ALL INSTRUMENTS Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Acid Phosphatase (Total) | U/l | 25.6 | 1-Naphthyl Phosphate substrate Kinetic 37°C |
| Albumin | g/l | 29.1 | Bromocresol Green |
| | g/dl | 2.91 | |
| | g/l | 27.6 | Bromocresol Purple |
| | g/dl | 2.76 | |
| | g/l | 26.8 | Turbidimetric Assays |
| | g/dl | 2.68 | |
| Alkaline Phosphatase | U/l | 460 | Diethanolamine buffer DEA 37°C |
| | U/l | 358 | Diethanolamine buffer DEA 30°C |
| | U/l | 294 | Diethanolamine buffer DEA 25°C |
| | U/l | 328 | AMP optimised to IFCC 37°C |
| | U/l | 256 | AMP optimised to IFCC 30°C |
| | U/l | 210 | AMP optimised to IFCC 25°C |
| | U/l | 312 | AMP non-optimised 37°C |
| | U/l | 243 | AMP non-optimised 30°C |
| | U/l | 199 | AMP non-optimised 25°C |
| ALT (GPT) | U/l | 181 | Tris buffer with P5P 37°C |
| | U/l | 134 | Tris buffer with P5P 30°C |
| | U/l | 102 | Tris buffer with P5P 25°C |
| | U/l | 153 | Tris buffer without P5P 37°C |
| | U/l | 113 | Tris buffer without P5P 30°C |
| | U/l | 86 | Tris buffer without P5P 25°C |
| | U/l | 145 | Tris buffer SCE 37°C |
| | U/l | 107 | Tris buffer SCE 30°C |
| | U/l | 82 | Tris buffer SCE 25°C |
| Amylase Pancreatic | U/l | 270 | Immunoinhibition EPS substrate 37°C |
| | U/l | 266 | Roche EPS Liquid 37°C |
| | U/l | 303 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 306 | pNP Maltotrioside substrates 37°C |
| | U/l | 300 | Siemens - blocked pNPG7 37°C |
| | U/l | 245 | Randox Lyo. Ethylidene pNPG7 37°C |
| | U/l | 323 | Randox Liquid Ethylidene pNPG7 37°C |
| | U/l | 285 | BM/Roche Colorimetric pNPG7 37°C |
| | U/l | 294 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 289 | Roche liquid stable pNPG7 37°C |
| | U/l | 369 | Siemens 2-chloro-pNPG3 37°C |
| | U/l | 307 | Beckman Coulter - blocked pNPG7 37°C |
| | U/l | 318 | Beckman Synchron AMY7 37°C |
| | U/l | 338 | Abbott Architect Non-IFCC Cal. 37°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**MEAN OF ALL INSTRUMENTS Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Amylase Total | U/l | 378 | Abbott Architect IFCC Cal. 37°C |
| AST (GOT) | U/l | 226 | Tris buffer with P5P 37°C |
| | U/l | 153 | Tris buffer with P5P 30°C |
| | U/l | 108 | Tris buffer with P5P 25°C |
| | U/l | 144 | Tris buffer without P5P 37°C |
| | U/l | 97 | Tris buffer without P5P 30°C |
| | U/l | 69 | Tris buffer without P5P 25°C |
| | U/l | 135 | Tris buffer SCE 37°C |
| | U/l | 91 | Tris buffer SCE 30°C |
| | U/l | 64 | Tris buffer SCE 25°C |
| Bicarbonate | mmol/l | 16.6 | Colorimetric |
| | mmol/l | 16.7 | Differential rate pH change |
| | mmol/l | 17.1 | Enzymatic |
| | mmol/l | 17.3 | Ion selective electrode |
| Bile Acids | µmol/l | 45.7 | 4th Generation Colorimetric |
| | µmol/l | 45.3 | 5th Generation Colorimetric |
| Bilirubin Direct | µmol/l | 28.6 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.67 | |
| | µmol/l | 30.0 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.76 | |
| | µmol/l | 30.1 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 1.76 | |
| | µmol/l | 29.7 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.74 | |
| | µmol/l | 30.6 | Modified Jendrassik |
| | mg/dl | 1.79 | |
| Bilirubin Total | µmol/l | 89.5 | Diazo with Dichloroaniline (DCA) |
| | mg/dl | 5.24 | |
| | µmol/l | 80.3 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.70 | |
| | µmol/l | 88.4 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 5.17 | |
| | µmol/l | 75.6 | Nitrobenzenediazonium salt |
| | mg/dl | 4.42 | |
| | µmol/l | 75.9 | Diazonium ion |
| | mg/dl | 4.44 | |
| | µmol/l | 87.1 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 5.09 | |
| | µmol/l | 93.3 | Modified Jendrassik |
| | mg/dl | 5.46 | |
| Calcium | mmol/l | 3.06 | Cresolphthalein complexone |
| | mg/dl | 12.3 | |
| | mmol/l | 3.02 | Ion selective electrode |
| | mg/dl | 12.1 | |



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## CALIBRATION SERUM LEVEL 3 (CAL 3)

**MEAN OF ALL INSTRUMENTS Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Calcium | mmol/l | 3.04 | Arsenazo III |
| | mg/dl | 12.2 | |
| | mmol/l | 3.08 | NM-BAPTA |
| | mg/dl | 12.3 | |
| Chloride | mmol/l | 117 | Colorimetric |
| | mmol/l | 115 | ISE indirect |
| | mmol/l | 117 | ISE direct |
| Cholesterol | mmol/l | 7.03 | Cholesterol Oxidase |
| | mg/dl | 271 | |
| Cholinesterase | U/l | 5263 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 531 | CK-NAC serum start (DGKC) 37°C |
| | U/l | 332 | CK-NAC serum start (DGKC) 30°C |
| | U/l | 226 | CK-NAC serum start (DGKC) 25°C |
| | U/l | 528 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 331 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 224 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 527 | CK-NAC (IFCC) 37°C |
| | U/l | 330 | CK-NAC (IFCC) 30°C |
| | U/l | 224 | CK-NAC (IFCC) 25°C |
| | U/l | 560 | Monothioglycerol 37°C |
| | U/l | 351 | Monothioglycerol 30°C |
| | U/l | 238 | Monothioglycerol 25°C |
| Copper | µmol/l | 26.9 | Atomic absorption |
| | µg/dl | 171 | |
| | µmol/l | 26.2 | Colorimetric |
| | µg/dl | 167 | |
| Creatinine | µmol/l | 391 | Alkaline picrate no deproteinization |
| | mg/dl | 4.42 | |
| | µmol/l | 401 | Enzymatic UV method |
| | mg/dl | 4.53 | |
| | µmol/l | 404 | Creatinine PAP method |
| | mg/dl | 4.57 | |
| | µmol/l | 395 | Jaffe rate blanked |
| | mg/dl | 4.46 | |
| | µmol/l | 425 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.80 | |
| | µmol/l | 406 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.59 | |
| | µmol/l | 397 | IDMS traceable |
| | mg/dl | 4.49 | |
| D-3-Hydroxybutyrate | mmol/l | 1.17 | Tris buffer 100mmol pH 8.5 |
| gamma-GT | U/l | 171 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 135 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 106 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |



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## CALIBRATION SERUM LEVEL 3 (CAL 3)

**MEAN OF ALL INSTRUMENTS Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| gamma-GT | U/l | 145 | Gamma glutamyl-4-nitroanilide 37°C |
| | U/l | 114 | Gamma glutamyl-4-nitroanilide 30°C |
| | U/l | 89 | Gamma glutamyl-4-nitroanilide 25°C |
| | U/l | 181 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 143 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 112 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| | U/l | 189 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 149 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 117 | Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| GLDH | U/l | 29 | Triethanolamine buffer 50 mmol 37°C |
| | U/l | 22 | Triethanolamine buffer 50 mmol 30°C |
| | U/l | 18 | Triethanolamine buffer 50 mmol 25°C |
| Glucose | mmol/l | 15.5 | Glucose dehydrogenase |
| | mg/dl | 279 | |
| | mmol/l | 15.6 | Hexokinase |
| | mg/dl | 281 | |
| | mmol/l | 15.3 | Oxygen electrode |
| | mg/dl | 276 | |
| | mmol/l | 15.6 | Glucose oxidase |
| | mg/dl | 281 | |
| Iron | µmol/l | 38.0 | Colorimetric with ppt. |
| | µg/dl | 212 | |
| | µmol/l | 38.0 | Colorimetric without ppt. |
| | µg/dl | 212 | |
| Lactate | mmol/l | 5.68 | Colorimetric Lactate Oxidase |
| | mg/dl | 51.2 | |
| | mmol/l | 6.05 | Enzymatic Electrode |
| | mg/dl | 54.5 | |
| LAP | U/l | 15 | NAGEL 37°C |
| LD (LDH) | U/l | 340 | L->P 37°C |
| | U/l | 245 | L->P 30°C |
| | U/l | 172 | L->P 25°C |
| | U/l | 823 | P->L Scandinavian & Dutch 37°C |
| | U/l | 594 | P->L Scandinavian & Dutch 30°C |
| | U/l | 417 | P->L Scandinavian & Dutch 25°C |
| | U/l | 734 | P->L German methods 37°C |
| | U/l | 530 | P->L German methods 30°C |
| | U/l | 372 | P->L German methods 25°C |
| | U/l | 735 | P->L SFBC 37°C |
| | U/l | 531 | P->L SFBC 30°C |
| | U/l | 373 | P->L SFBC 25°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**MEAN OF ALL INSTRUMENTS Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| LD (LDH) | U/l | 381 | L->P IFCC 37°C |
| | U/l | 275 | L->P IFCC 30°C |
| | U/l | 193 | L->P IFCC 25°C |
| Lipase | U/l | 66 | Other Colorimetric 37°C |
| | U/l | 63 | Roche Colorimetric 37°C |
| | U/l | 95 | Randox Colorimetric 37°C |
| Lithium | mmol/l | 2.14 | Ion selective electrode |
| | mg/dl | 1.49 | |
| | mmol/l | 2.04 | Spectrophotometric |
| | mg/dl | 1.42 | |
| | mmol/l | 2.09 | Randox Colorimetric |
| | mg/dl | 1.45 | |
| Magnesium | mmol/l | 1.72 | Arsenazo III |
| | mg/dl | 4.18 | |
| | mmol/l | 1.69 | Calmagite |
| | mg/dl | 4.11 | |
| | mmol/l | 1.76 | Xylidyl Blue |
| | mg/dl | 4.28 | |
| | mmol/l | 1.74 | Methylthymol blue |
| | mg/dl | 4.23 | |
| | mmol/l | 1.77 | Chlorphosphonazo III |
| | mg/dl | 4.30 | |
| | mmol/l | 1.74 | Enzymatic |
| | mg/dl | 4.23 | |
| Osmolality | mOsm/kg | 349 | Calculated |
| | mOsm/kg | 388 | Freezing point depression |
| Phosphate Inorganic | mmol/l | 2.21 | Phosphomolybdate enzymatic |
| | mg/dl | 6.85 | |
| | mmol/l | 2.21 | Phosphomolybdate UV |
| | mg/dl | 6.85 | |
| Potassium | mmol/l | 6.28 | Enzymatic |
| | mmol/l | 6.21 | ISE method - direct |
| | mmol/l | 6.29 | ISE method - indirect |
| Protein Total | g/l | 45.0 | Biuret reaction end point |
| | g/dl | 4.50 | |
| | g/l | 43.8 | Biuret reaction kinetic |
| | g/dl | 4.38 | |
| Sodium | mmol/l | 161 | Enzymatic |
| | mmol/l | 159 | ISE method - direct |
| | mmol/l | 161 | ISE method - indirect |
| TIBC | µmol/l | 44.9 | Removal of excess free iron |
| | µg/dl | 251 | |
| | µmol/l | 48.2 | FE+UIBC(saturation with iron) |
| | µg/dl | 269 | |



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## CALIBRATION SERUM LEVEL 3 (CAL 3)

**MEAN OF ALL INSTRUMENTS Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| TIBC | µmol/l | 49.1 | Direct Colorimetric |
| | µg/dl | 274 | |
| | µmol/l | 41.7 | Calculated from Transferrin |
| | µg/dl | 233 | |
| | µmol/l | 54.7 | Randox Direct |
| | µg/dl | 306 | |
| Triglycerides | mmol/l | 2.88 | Lipase/GPO-PAP no correction |
| | mg/dl | 255 | |
| | mmol/l | 2.85 | Lipase/GPO-PAP 0.11mmol/l correction |
| | mg/dl | 252 | |
| | mmol/l | 2.94 | L/G Kinase EP. no correction |
| | mg/dl | 260 | |
| | mmol/l | 2.87 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 254 | |
| Urea | mmol/l | 21.2 | Urease end point |
| | mg/dl | 127 | |
| | mmol/l | 21.3 | Urease kinetic |
| | mg/dl | 128 | |
| | mmol/l | 21.3 | BUN |
| | mg/dl | 59.8 | |
| Uric Acid (Urate) | mmol/l | 0.557 | Uricase catalase 340nm |
| | mg/dl | 9.36 | |
| | mmol/l | 0.572 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.61 | |
| | mmol/l | 0.567 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.53 | |
| | mmol/l | 0.567 | Spectrophotometric at 280-290 |
| | mg/dl | 9.53 | |
| | mmol/l | 0.561 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.42 | |
| Zinc | µmol/l | 37.3 | Colorimetric with deproteinisation |
| | µg/dl | 244 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**MINDRAY BS-200/300/400 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 30.0 | Bromocresol Green |
| | g/dl | 3.00 | |
| Alkaline Phosphatase | U/l | 341 | AMP optimised to IFCC 37°C |
| | U/l | 266 | AMP optimised to IFCC 30°C |
| | U/l | 218 | AMP optimised to IFCC 25°C |
| ALT (GPT) | U/l | 161 | Tris buffer without P5P 37°C |
| | U/l | 119 | Tris buffer without P5P 30°C |
| | U/l | 91 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 361 | Siemens 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 148 | Tris buffer without P5P 37°C |
| | U/l | 100 | Tris buffer without P5P 30°C |
| | U/l | 70 | Tris buffer without P5P 25°C |
| Bilirubin Direct | µmol/l | 34.6 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 2.02 | |
| Bilirubin Total | µmol/l | 82.4 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.82 | |
| Calcium | mmol/l | 3.07 | Arsenazo III |
| | mg/dl | 12.3 | |
| Chloride | mmol/l | 118 | ISE indirect |
| Cholesterol | mmol/l | 7.13 | Cholesterol Oxidase |
| | mg/dl | 275 | |
| CK Total | U/l | 535 | CK-NAC (IFCC) 37°C |
| | U/l | 335 | CK-NAC (IFCC) 30°C |
| | U/l | 227 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 370 | Alkaline picrate no deproteinization |
| | mg/dl | 4.18 | |
| gamma-GT | U/l | 172 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 136 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 106 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.6 | Hexokinase |
| | mg/dl | 281 | |
| | mmol/l | 15.7 | Glucose oxidase |
| | mg/dl | 283 | |
| Iron | µmol/l | 37.4 | Colorimetric without ppt. |
| | µg/dl | 209 | |
| LD (LDH) | U/l | 739 | P->L SFBC 37°C |
| | U/l | 534 | P->L SFBC 30°C |
| | U/l | 375 | P->L SFBC 25°C |
| | U/l | 376 | L->P IFCC 37°C |
| | U/l | 271 | L->P IFCC 30°C |
| | U/l | 191 | L->P IFCC 25°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**MINDRAY BS-200/300/400 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Magnesium | mmol/l | 1.59 | Xylidyl Blue |
| | mg/dl | 3.86 | |
| Phosphate Inorganic | mmol/l | 2.15 | Phosphomolybdate UV |
| | mg/dl | 6.67 | |
| Potassium | mmol/l | 6.32 | ISE method - indirect |
| Protein Total | g/l | 45.8 | Biuret reaction end point |
| | g/dl | 4.58 | |
| Sodium | mmol/l | 160 | ISE method - indirect |
| Triglycerides | mmol/l | 2.80 | Lipase/GPO-PAP no correction |
| | mg/dl | 248 | |
| Urea | mmol/l | 21.3 | Urease kinetic |
| | mg/dl | 128 | |
| | mmol/l | 21.3 | BUN |
| | mg/dl | 59.8 | |
| Uric Acid (Urate) | mmol/l | 0.566 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.51 | |
| | mmol/l | 0.570 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.58 | |
| | mmol/l | 0.558 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.37 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas 6000 c501 e601 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 30.2 | Bromocresol Green |
| | g/dl | 3.02 | |
| | g/l | 26.5 | Bromocresol Purple |
| | g/dl | 2.65 | |
| | g/l | 26.9 | Turbidimetric Assays |
| | g/dl | 2.69 | |
| Alkaline Phosphatase | U/l | 263 | Roche Integra AMP buffer 37°C |
| | U/l | 205 | Roche Integra AMP buffer 30°C |
| | U/l | 168 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 148 | Tris buffer without P5P 37°C |
| | U/l | 110 | Tris buffer without P5P 30°C |
| | U/l | 83 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 264 | Roche EPS Liquid 37°C |
| Amylase Total | U/l | 286 | Roche Integra 2-chloro-pNPG7 37°C |
| | U/l | 288 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 142 | Tris buffer without P5P 37°C |
| | U/l | 96 | Tris buffer without P5P 30°C |
| | U/l | 68 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 17.3 | Colorimetric |
| | mmol/l | 17.1 | Enzymatic |
| Bile Acids | µmol/l | 46.0 | Enzymatic Colorimetric |
| Bilirubin Direct | µmol/l | 30.0 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.76 | |
| | µmol/l | 29.9 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.75 | |
| | µmol/l | 29.9 | Roche JG factored |
| | mg/dl | 1.75 | |
| Bilirubin Total | µmol/l | 75.4 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.41 | |
| | µmol/l | 75.5 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.41 | |
| | µmol/l | 75.4 | Diazonium ion |
| | mg/dl | 4.41 | |
| Calcium | mmol/l | 3.07 | Cresolphthalein complexone |
| | mg/dl | 12.3 | |
| | mmol/l | 3.07 | NM-BAPTA |
| | mg/dl | 12.3 | |
| Chloride | mmol/l | 113 | ISE indirect |
| Cholesterol | mmol/l | 6.90 | Cholesterol Oxidase |
| | mg/dl | 266 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas 6000 c501 e601 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Cholinesterase | U/l | 5268 | Colorimetric Butyrylthiocholine 37°C |
| CK Total | U/l | 517 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 324 | CK-NAC substrate start (DGKC) 30°C |
| | U/l | 220 | CK-NAC substrate start (DGKC) 25°C |
| | U/l | 507 | CK-NAC (IFCC) 37°C |
| | U/l | 317 | CK-NAC (IFCC) 30°C |
| | U/l | 215 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 399 | Alkaline picrate no deproteinization |
| | mg/dl | 4.51 | |
| | µmol/l | 412 | Enzymatic UV method |
| | mg/dl | 4.65 | |
| | µmol/l | 409 | Roche Creatinine Plus |
| | mg/dl | 4.62 | |
| | µmol/l | 414 | Jaffe rate blanked |
| | mg/dl | 4.68 | |
| | µmol/l | 424 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.79 | |
| | µmol/l | 420 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.75 | |
| | µmol/l | 405 | IDMS traceable |
| | mg/dl | 4.58 | |
| D-3-Hydroxybutyrate | mmol/l | 1.21 | Tris buffer 100mmol pH 8.5 |
| gamma-GT | U/l | 158 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 125 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 97 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 184 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 145 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 114 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| GLDH | U/l | 29 | Triethanolamine buffer 50 mmol 37°C |
| | U/l | 22 | Triethanolamine buffer 50 mmol 30°C |
| | U/l | 18 | Triethanolamine buffer 50 mmol 25°C |
| Glucose | mmol/l | 15.3 | Glucose dehydrogenase |
| | mg/dl | 275 | |
| | mmol/l | 15.5 | Hexokinase |
| | mg/dl | 279 | |
| Iron | µmol/l | 37.5 | Colorimetric with ppt. |
| | µg/dl | 210 | |
| | µmol/l | 37.9 | Colorimetric without ppt. |
| | µg/dl | 212 | |
| Lactate | mmol/l | 5.59 | Colorimetric Lactate Oxidase |
| | mg/dl | 50.4 | |
| LD (LDH) | U/l | 731 | P->L German methods 37°C |
| | U/l | 528 | P->L German methods 30°C |
| | U/l | 371 | P->L German methods 25°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas 6000 c501 e601 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| LD (LDH) | U/l | 385 | L->P IFCC 37°C |
| | U/l | 278 | L->P IFCC 30°C |
| | U/l | 195 | L->P IFCC 25°C |
| Lipase | U/l | 62 | Roche Colorimetric 37°C |
| Lithium | mmol/l | 2.09 | Spectrophotometric |
| | mg/dl | 1.45 | |
| Magnesium | mmol/l | 1.76 | Xylidyl Blue |
| | mg/dl | 4.28 | |
| | mmol/l | 1.76 | Chlorphosphonazo III |
| | mg/dl | 4.28 | |
| Phosphate Inorganic | mmol/l | 2.21 | Phosphomolybdate enzymatic |
| | mg/dl | 6.85 | |
| | mmol/l | 2.21 | Phosphomolybdate UV |
| | mg/dl | 6.85 | |
| Potassium | mmol/l | 6.34 | ISE method - indirect |
| Protein Total | g/l | 44.2 | Biuret reaction CX4/5/7 |
| | g/dl | 4.42 | |
| | g/l | 44.8 | Biuret reaction end point |
| | g/dl | 4.48 | |
| | g/l | 45.5 | Biuret reaction kinetic |
| | g/dl | 4.55 | |
| Sodium | mmol/l | 162 | ISE method - indirect |
| TIBC | µmol/l | 47.1 | FE+UIBC(saturation with iron) |
| | µg/dl | 263 | |
| | µmol/l | 43.2 | Calculated from Transferrin |
| | µg/dl | 241 | |
| Triglycerides | mmol/l | 2.87 | Lipase/GPO-PAP no correction |
| | mg/dl | 254 | |
| | mmol/l | 2.85 | L/G Kinase EP. no correction |
| | mg/dl | 252 | |
| Urea | mmol/l | 21.1 | Urease kinetic |
| | mg/dl | 127 | |
| | mmol/l | 21.1 | BUN |
| | mg/dl | 59.2 | |
| Uric Acid (Urate) | mmol/l | 0.556 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.34 | |
| | mmol/l | 0.557 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.36 | |
| | mmol/l | 0.555 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.32 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas C111® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 29.5 | Bromocresol Green |
| | g/dl | 2.95 | |
| Alkaline Phosphatase | U/l | 276 | Roche Integra AMP buffer 37°C |
| | U/l | 215 | Roche Integra AMP buffer 30°C |
| | U/l | 176 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 147 | Tris buffer without P5P 37°C |
| | U/l | 109 | Tris buffer without P5P 30°C |
| | U/l | 83 | Tris buffer without P5P 25°C |
| Amylase Total | U/l | 296 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 141 | Tris buffer without P5P 37°C |
| | U/l | 95 | Tris buffer without P5P 30°C |
| | U/l | 67 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 15.9 | Enzymatic |
| Bilirubin Direct | µmol/l | 30.0 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.76 | |
| | µmol/l | 29.9 | Roche JG factored |
| | mg/dl | 1.75 | |
| Bilirubin Total | µmol/l | 72.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.26 | |
| | µmol/l | 72.7 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.25 | |
| | µmol/l | 71.5 | Diazonium ion |
| | mg/dl | 4.18 | |
| Calcium | mmol/l | 3.10 | NM-BAPTA |
| | mg/dl | 12.4 | |
| Chloride | mmol/l | 118 | ISE indirect |
| Cholesterol | mmol/l | 7.09 | Cholesterol Oxidase |
| | mg/dl | 274 | |
| CK Total | U/l | 511 | CK-NAC (IFCC) 37°C |
| | U/l | 320 | CK-NAC (IFCC) 30°C |
| | U/l | 217 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 400 | Roche Creatinine Plus |
| | mg/dl | 4.52 | |
| | µmol/l | 414 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.68 | |
| | µmol/l | 401 | Jaffe rate blanked compensated (-18 µmol/l) |
| | mg/dl | 4.53 | |
| gamma-GT | U/l | 167 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 132 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 103 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas C111® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| gamma-GT | U/l | 175 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 138 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 108 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.9 | Hexokinase |
| | mg/dl | 286 | |
| LD (LDH) | U/l | 386 | L->P IFCC 37°C |
| | U/l | 279 | L->P IFCC 30°C |
| | U/l | 196 | L->P IFCC 25°C |
| Magnesium | mmol/l | 1.76 | Chlorphosphonazo III |
| | mg/dl | 4.28 | |
| Phosphate Inorganic | mmol/l | 2.25 | Phosphomolybdate UV |
| | mg/dl | 6.98 | |
| Potassium | mmol/l | 6.17 | ISE method - indirect |
| Protein Total | g/l | 46.2 | Biuret reaction end point |
| | g/dl | 4.62 | |
| Sodium | mmol/l | 157 | ISE method - indirect |
| Triglycerides | mmol/l | 2.93 | Lipase/GPO-PAP no correction |
| | mg/dl | 259 | |
| Urea | mmol/l | 20.7 | Urease kinetic |
| | mg/dl | 124 | |
| | mmol/l | 20.7 | BUN |
| | mg/dl | 58.1 | |
| Uric Acid (Urate) | mmol/l | 0.577 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.69 | |
| | mmol/l | 0.570 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.58 | |
| | mmol/l | 0.575 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.66 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas C311® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 30.0 | Bromocresol Green |
| | g/dl | 3.00 | |
| | g/l | 27.1 | Bromocresol Purple |
| | g/dl | 2.71 | |
| Alkaline Phosphatase | U/l | 261 | Roche Integra AMP buffer 37°C |
| | U/l | 203 | Roche Integra AMP buffer 30°C |
| | U/l | 167 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 149 | Tris buffer without P5P 37°C |
| | U/l | 110 | Tris buffer without P5P 30°C |
| | U/l | 84 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 271 | Roche EPS Liquid 37°C |
| Amylase Total | U/l | 291 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 143 | Tris buffer without P5P 37°C |
| | U/l | 97 | Tris buffer without P5P 30°C |
| | U/l | 68 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 16.4 | Enzymatic |
| Bilirubin Direct | µmol/l | 29.2 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.71 | |
| | µmol/l | 28.4 | Roche JG factored |
| | mg/dl | 1.66 | |
| Bilirubin Total | µmol/l | 75.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.43 | |
| | µmol/l | 75.1 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.39 | |
| | µmol/l | 75.5 | Diazonium ion |
| | mg/dl | 4.42 | |
| Calcium | mmol/l | 3.09 | Cresolphthalein complexone |
| | mg/dl | 12.4 | |
| | mmol/l | 3.11 | NM-BAPTA |
| | mg/dl | 12.5 | |
| Chloride | mmol/l | 113 | ISE indirect |
| Cholesterol | mmol/l | 6.96 | Cholesterol Oxidase |
| | mg/dl | 269 | |
| CK Total | U/l | 518 | CK-NAC (IFCC) 37°C |
| | U/l | 324 | CK-NAC (IFCC) 30°C |
| | U/l | 220 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 407 | Alkaline picrate no deproteinization |
| | mg/dl | 4.60 | |
| | µmol/l | 406 | Enzymatic UV method |
| | mg/dl | 4.58 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas C311® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Creatinine | µmol/l | 414 | Roche Creatinine Plus |
| | mg/dl | 4.68 | |
| | µmol/l | 432 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.88 | |
| gamma-GT | U/l | 161 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 127 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 99 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 187 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 147 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 115 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.6 | Hexokinase |
| | mg/dl | 281 | |
| | mmol/l | 16.1 | Glucose oxidase |
| | mg/dl | 290 | |
| Iron | µmol/l | 37.9 | Colorimetric without ppt. |
| | µg/dl | 212 | |
| Lactate | mmol/l | 5.48 | Colorimetric Lactate Oxidase |
| | mg/dl | 49.4 | |
| LD (LDH) | U/l | 719 | P->L German methods 37°C |
| | U/l | 519 | P->L German methods 30°C |
| | U/l | 365 | P->L German methods 25°C |
| | U/l | 387 | L->P IFCC 37°C |
| | U/l | 279 | L->P IFCC 30°C |
| | U/l | 196 | L->P IFCC 25°C |
| Lipase | U/l | 61 | Roche Colorimetric 37°C |
| Magnesium | mmol/l | 1.76 | Xylidyl Blue |
| | mg/dl | 4.28 | |
| | mmol/l | 1.75 | Chlorphosphonazo III |
| | mg/dl | 4.25 | |
| Phosphate Inorganic | mmol/l | 2.23 | Phosphomolybdate UV |
| | mg/dl | 6.91 | |
| Potassium | mmol/l | 6.35 | ISE method - indirect |
| Protein Total | g/l | 45.0 | Biuret reaction end point |
| | g/dl | 4.50 | |
| Sodium | mmol/l | 162 | ISE method - indirect |
| TIBC | µmol/l | 49.1 | FE+UIBC(saturation with iron) |
| | µg/dl | 274 | |
| Triglycerides | mmol/l | 2.88 | Lipase/GPO-PAP no correction |
| | mg/dl | 255 | |
| | mmol/l | 2.84 | L/G Kinase EP. no correction |
| | mg/dl | 251 | |
| Urea | mmol/l | 21.3 | Urease kinetic |
| | mg/dl | 128 | |



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## CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas C311®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Urea | mmol/l | 21.3 | BUN |
| | mg/dl | 59.8 | |
| Uric Acid (Urate) | mmol/l | 0.565 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.49 | |
| | mmol/l | 0.569 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.56 | |
| | mmol/l | 0.568 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.54 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas c701 / c702 / c711 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 30.1 | Bromocresol Green |
| | g/dl | 3.01 | |
| Alkaline Phosphatase | U/l | 254 | Roche Integra AMP buffer 37°C |
| | U/l | 198 | Roche Integra AMP buffer 30°C |
| | U/l | 162 | Roche Integra AMP buffer 25°C |
| ALT (GPT) | U/l | 150 | Tris buffer without P5P 37°C |
| | U/l | 111 | Tris buffer without P5P 30°C |
| | U/l | 84 | Tris buffer without P5P 25°C |
| Amylase Pancreatic | U/l | 266 | Roche EPS Liquid 37°C |
| Amylase Total | U/l | 288 | Roche liquid stable pNPG7 37°C |
| AST (GOT) | U/l | 142 | Tris buffer without P5P 37°C |
| | U/l | 96 | Tris buffer without P5P 30°C |
| | U/l | 68 | Tris buffer without P5P 25°C |
| Bicarbonate | mmol/l | 17.2 | Enzymatic |
| Bile Acids | µmol/l | 45.3 | Enzymatic Colorimetric |
| Bilirubin Direct | µmol/l | 30.1 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 1.76 | |
| | µmol/l | 29.7 | Roche JG factored |
| | mg/dl | 1.74 | |
| Bilirubin Total | µmol/l | 75.2 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.40 | |
| | µmol/l | 73.7 | Dichlorophenyl Diazonium (DPD) |
| | mg/dl | 4.31 | |
| | µmol/l | 74.5 | Diazonium ion |
| | mg/dl | 4.36 | |
| Calcium | mmol/l | 3.03 | Cresolphthalein complexone |
| | mg/dl | 12.1 | |
| | mmol/l | 3.05 | NM-BAPTA |
| | mg/dl | 12.2 | |
| Chloride | mmol/l | 114 | ISE indirect |
| Cholesterol | mmol/l | 6.83 | Cholesterol Oxidase |
| | mg/dl | 264 | |
| CK Total | U/l | 503 | CK-NAC (IFCC) 37°C |
| | U/l | 315 | CK-NAC (IFCC) 30°C |
| | U/l | 214 | CK-NAC (IFCC) 25°C |
| Creatinine | µmol/l | 413 | Roche Creatinine Plus |
| | mg/dl | 4.66 | |
| | µmol/l | 428 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.84 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**Roche Cobas c701 / c702 / c711 Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| gamma-GT | U/l | 152 | Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C |
| | U/l | 120 | Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C |
| | U/l | 94 | Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C |
| | U/l | 178 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 140 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C |
| | U/l | 110 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C |
| Glucose | mmol/l | 15.4 | Hexokinase |
| | mg/dl | 278 | |
| Iron | µmol/l | 36.9 | Colorimetric without ppt. |
| | µg/dl | 206 | |
| Lactate | mmol/l | 5.57 | Colorimetric Lactate Oxidase |
| | mg/dl | 50.2 | |
| LD (LDH) | U/l | 382 | L->P IFCC 37°C |
| | U/l | 276 | L->P IFCC 30°C |
| | U/l | 194 | L->P IFCC 25°C |
| Lipase | U/l | 61 | Roche Colorimetric 37°C |
| Lithium | mmol/l | 2.04 | Spectrophotometric |
| | mg/dl | 1.42 | |
| Magnesium | mmol/l | 1.75 | Xylidyl Blue |
| | mg/dl | 4.25 | |
| Phosphate Inorganic | mmol/l | 2.19 | Phosphomolybdate UV |
| | mg/dl | 6.79 | |
| Potassium | mmol/l | 6.35 | ISE method - indirect |
| Protein Total | g/l | 44.7 | Biuret reaction end point |
| | g/dl | 4.47 | |
| Sodium | mmol/l | 163 | ISE method - indirect |
| TIBC | µmol/l | 47.0 | FE+UIBC(saturation with iron) |
| | µg/dl | 263 | |
| Triglycerides | mmol/l | 2.87 | Lipase/GPO-PAP no correction |
| | mg/dl | 254 | |
| Urea | mmol/l | 21.0 | Urease kinetic |
| | mg/dl | 126 | |
| | mmol/l | 21.0 | BUN |
| | mg/dl | 58.9 | |
| Uric Acid (Urate) | mmol/l | 0.555 | Uricase peroxidase with ascorbate oxidase |
| | mg/dl | 9.32 | |
| | mmol/l | 0.562 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.44 | |
| | mmol/l | 0.550 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.24 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**RX SERIES® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 29.6 | Bromocresol Green |
| | g/dl | 2.96 | |
| Alkaline Phosphatase | U/l | 498 | Diethanolamine buffer DEA 37°C |
| | U/l | 319 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 158 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 303 | Randox Liquid Ethylidene pNPG7 37°C |
| Amylase Total | U/l | 323 | Randox Liquid Ethylidene pNPG7 37°C |
| AST (GOT) | U/l | 146 | Tris buffer without P5P 37°C |
| Bile Acids | µmol/l | 45.3 | 5th Generation Colorimetric |
| Bilirubin Direct | µmol/l | 29.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.74 | |
| | µmol/l | 30.1 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.76 | |
| Bilirubin Total | µmol/l | 82.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.84 | |
| | µmol/l | 86.2 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 5.04 | |
| Calcium | mmol/l | 3.08 | Arsenazo III |
| | mg/dl | 12.3 | |
| Cholesterol | mmol/l | 7.37 | Cholesterol Oxidase |
| | mg/dl | 284 | |
| CK Total | U/l | 534 | CK-NAC substrate start (DGKC) 37°C |
| | U/l | 563 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 353 | Alkaline picrate no deproteinization |
| | mg/dl | 3.99 | |
| | µmol/l | 402 | Enzymatic UV method |
| | mg/dl | 4.54 | |
| gamma-GT | U/l | 189 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 15.9 | Hexokinase |
| | mg/dl | 286 | |
| | mmol/l | 16.1 | Glucose oxidase |
| | mg/dl | 290 | |
| Iron | µmol/l | 40.1 | Colorimetric without ppt. |
| | µg/dl | 224 | |
| Lactate | mmol/l | 5.48 | Colorimetric Lactate Oxidase |
| | mg/dl | 49.4 | |
| LD (LDH) | U/l | 762 | P->L German methods 37°C |
| | U/l | 361 | L->P IFCC 37°C |
| Lipase | U/l | 95 | Randox Colorimetric 37°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**RX SERIES® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Lithium | mmol/l | 2.09 | Colorimetric |
| | mg/dl | 1.45 | |
| Magnesium | mmol/l | 1.74 | Xylidyl Blue |
| | mg/dl | 4.23 | |
| Phosphate Inorganic | mmol/l | 2.28 | Phosphomolybdate UV |
| | mg/dl | 7.07 | |
| Potassium | mmol/l | 6.28 | Enzymatic |
| Protein Total | g/l | 46.7 | Biuret reaction end point |
| | g/dl | 4.67 | |
| Sodium | mmol/l | 161 | Enzymatic |
| TIBC | µmol/l | 54.7 | Direct Colorimetric |
| | µg/dl | 306 | |
| Triglycerides | mmol/l | 2.84 | Lipase/GPO-PAP no correction |
| | mg/dl | 251 | |
| Urea | mmol/l | 21.7 | Urease kinetic |
| | mg/dl | 130 | |
| | mmol/l | 21.7 | BUN |
| | mg/dl | 60.9 | |
| Uric Acid (Urate) | mmol/l | 0.594 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 10.0 | |
| | mmol/l | 0.591 | Uricase Peroxidase with ascorbate oxidase @ 546nm |
| | mg/dl | 9.93 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 28.3 | Bromocresol Green |
| | g/dl | 2.83 | |
| | g/l | 26.3 | Bromocresol Purple |
| | g/dl | 2.63 | |
| Alkaline Phosphatase | U/l | 284 | AMP optimised to IFCC 37°C |
| | U/l | 276 | AMP non-optimised 37°C |
| ALT (GPT) | U/l | 170 | Tris buffer without P5P 37°C |
| Amylase Pancreatic | U/l | 260 | Immunoinhibition EPS substrate 37°C |
| Amylase Total | U/l | 299 | Siemens - blocked pNPG7 37°C |
| AST (GOT) | U/l | 154 | Tris buffer without P5P 37°C |
| Bicarbonate | mmol/l | 18.3 | Enzymatic |
| Bilirubin Direct | µmol/l | 29.8 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 1.74 | |
| Bilirubin Total | µmol/l | 86.1 | Oxidation to Biliverdin/Vanadate |
| | mg/dl | 5.04 | |
| Calcium | mmol/l | 3.15 | Cresolphthalein complexone |
| | mg/dl | 12.6 | |
| | mmol/l | 2.98 | Arsenazo III |
| | mg/dl | 11.9 | |
| Chloride | mmol/l | 118 | ISE indirect |
| Cholesterol | mmol/l | 7.21 | Cholesterol Oxidase |
| | mg/dl | 278 | |
| CK Total | U/l | 535 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 386 | Enzymatic UV method |
| | mg/dl | 4.36 | |
| | µmol/l | 413 | Jaffe rate blanked comp. (-26 µmol/l) |
| | mg/dl | 4.67 | |
| gamma-GT | U/l | 180 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| Glucose | mmol/l | 15.2 | Hexokinase |
| | mg/dl | 274 | |
| | mmol/l | 15.0 | Glucose oxidase |
| | mg/dl | 270 | |
| Iron | µmol/l | 38.1 | Colorimetric without ppt. |
| | µg/dl | 213 | |
| Lactate | mmol/l | 5.69 | Colorimetric Lactate Oxidase |
| | mg/dl | 51.3 | |
| LD (LDH) | U/l | 748 | P->L German methods 37°C |
| | U/l | 378 | L->P IFCC 37°C |
| Lipase | U/l | 92 | Other Colorimetric 37°C |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**SIEMENS ADVIA 1200/1650/1800/2400® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Lithium | mmol/l | 1.98 | Spectrophotometric |
| | mg/dl | 1.37 | |
| Magnesium | mmol/l | 1.76 | Xylidyl Blue |
| | mg/dl | 4.28 | |
| Phosphate Inorganic | mmol/l | 2.23 | Phosphomolybdate UV |
| | mg/dl | 6.91 | |
| Potassium | mmol/l | 6.34 | ISE method - indirect |
| Protein Total | g/l | 45.5 | Biuret reaction end point |
| | g/dl | 4.55 | |
| Sodium | mmol/l | 162 | ISE method - indirect |
| TIBC | µmol/l | 51.2 | Direct Colorimetric |
| | µg/dl | 286 | |
| Triglycerides | mmol/l | 2.94 | Lipase/GPO-PAP no correction |
| | mg/dl | 260 | |
| Urea | mmol/l | 21.5 | Urease kinetic |
| | mg/dl | 129 | |
| | mmol/l | 21.5 | BUN |
| | mg/dl | 60.3 | |
| Uric Acid (Urate) | mmol/l | 0.569 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.56 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**SIEMENS DIMENSION EXL®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 27.0 | Bromocresol Purple |
| | g/dl | 2.70 | |
| Alkaline Phosphatase | U/l | 296 | Siemens Dimension AMP buffer 37°C |
| | U/l | 289 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 168 | Tris buffer with P5P 37°C |
| | U/l | 164 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total | U/l | 371 | Siemens 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 190 | Tris buffer with P5P 37°C |
| | U/l | 196 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate | mmol/l | 18.1 | Enzymatic |
| Bilirubin Direct | µmol/l | 18.0 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.05 | |
| Bilirubin Total | µmol/l | 80.6 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.71 | |
| Calcium | mmol/l | 3.03 | Cresolphthalein complexone |
| | mg/dl | 12.1 | |
| Chloride | mmol/l | 118 | ISE indirect |
| Cholesterol | mmol/l | 6.62 | Dimension-Siemens reagents |
| | mg/dl | 256 | |
| CK Total | U/l | 509 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 404 | Alkaline picrate no deproteinization |
| | mg/dl | 4.57 | |
| | µmol/l | 410 | IDMS traceable |
| | mg/dl | 4.64 | |
| gamma-GT | U/l | 183 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 218 | Siemens Dimension (non IFCC) 37°C |
| Glucose | mmol/l | 15.6 | Hexokinase |
| | mg/dl | 281 | |
| Iron | µmol/l | 36.5 | Colorimetric without ppt. |
| | µg/dl | 204 | |
| Lactate | mmol/l | 5.78 | UV LDH |
| | mg/dl | 52.1 | |
| LD (LDH) | U/l | 372 | Siemens Dimension L-P Non IFCC 37°C |
| | U/l | 369 | L->P IFCC 37°C |
| Lipase | U/l | 271 | Colorimetric Siemens Dimension (LIPL Kit) 37°C |
| Magnesium | mmol/l | 1.73 | Methylthymol blue |
| | mg/dl | 4.20 | |
| Phosphate Inorganic | mmol/l | 2.27 | Phosphomolybdate UV |
| | mg/dl | 7.04 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**SIEMENS DIMENSION EXL® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Potassium | mmol/l | 6.31 | ISE method - indirect |
| Protein Total | g/l | 46.6 | Biuret reaction end point |
| | g/dl | 4.66 | |
| Sodium | mmol/l | 162 | ISE method - indirect |
| Triglycerides | mmol/l | 2.82 | Lipase/GPO-PAP no correction |
| | mg/dl | 250 | |
| | mmol/l | 2.86 | L/G Kinase EP. no correction |
| | mg/dl | 253 | |
| | mmol/l | 2.88 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 255 | |
| Urea | mmol/l | 21.7 | Urease kinetic |
| | mg/dl | 130 | |
| | mmol/l | 21.7 | BUN |
| | mg/dl | 60.9 | |
| Uric Acid (Urate) | mmol/l | 0.573 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.63 | |
| | mmol/l | 0.567 | Spectrophotometric at 280-290 |
| | mg/dl | 9.53 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**SIEMENS DIMENSION RxL/Max/Xpand®  Lot. No. 997UE  Cat. No. CAL2351**

**Size 20 x 5ml  Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Albumin | g/l | 27.0 | Bromocresol Purple |
| | g/dl | 2.70 | |
| Alkaline Phosphatase | U/l | 285 | Siemens Dimension AMP buffer 37°C |
| | U/l | 284 | AMP optimised to IFCC 37°C |
| ALT (GPT) | U/l | 169 | Tris buffer with P5P 37°C |
| | U/l | 164 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Amylase Total | U/l | 367 | Siemens 2-chloro-pNPG3 37°C |
| AST (GOT) | U/l | 193 | Tris buffer with P5P 37°C |
| | U/l | 194 | Siemens Dade Standard Non IFCC Correlated 37°C |
| Bicarbonate | mmol/l | 17.1 | Enzymatic |
| Bilirubin Direct | µmol/l | 17.8 | Diazo with Sulphanilic Acid |
| | mg/dl | 1.04 | |
| Bilirubin Total | µmol/l | 81.7 | Diazo with Sulphanilic Acid |
| | mg/dl | 4.78 | |
| Calcium | mmol/l | 3.05 | Cresolphthalein complexone |
| | mg/dl | 12.2 | |
| Chloride | mmol/l | 119 | ISE indirect |
| Cholesterol | mmol/l | 6.65 | Dimension-Siemens reagents |
| | mg/dl | 257 | |
| CK Total | U/l | 517 | CK-NAC (IFCC) 37°C |
| Creatinine | µmol/l | 406 | Alkaline picrate no deproteinization |
| | mg/dl | 4.59 | |
| | µmol/l | 403 | Enzymatic UV method |
| | mg/dl | 4.56 | |
| | µmol/l | 411 | IDMS traceable |
| | mg/dl | 4.65 | |
| gamma-GT | U/l | 191 | Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C |
| | U/l | 212 | Siemens Dimension (non IFCC) 37°C |
| Glucose | mmol/l | 15.7 | Hexokinase |
| | mg/dl | 282 | |
| Iron | µmol/l | 36.2 | Colorimetric without ppt. |
| | µg/dl | 202 | |
| LD (LDH) | U/l | 375 | Siemens Dimension L-P Non IFCC 37°C |
| | U/l | 373 | L->P IFCC 37°C |
| Lipase | U/l | 271 | Colorimetric Siemens Dimension (LIPL Kit) 37°C |
| Magnesium | mmol/l | 1.75 | Methylthymol blue |
| | mg/dl | 4.25 | |
| Phosphate Inorganic | mmol/l | 2.27 | Phosphomolybdate enzymatic |
| | mg/dl | 7.04 | |



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# CALIBRATION SERUM LEVEL 3 (CAL 3)

**SIEMENS DIMENSION RxL/Max/Xpand® Lot. No. 997UE Cat. No. CAL2351**

**Size 20 x 5ml Expiry 2020-07-28**

| Analyte | unit | Target | methods |
|---|---|---|---|
| Phosphate Inorganic | mmol/l | 2.27 | Phosphomolybdate UV |
| | mg/dl | 7.04 | |
| Potassium | mmol/l | 6.39 | ISE method - indirect |
| Protein Total | g/l | 46.5 | Biuret reaction end point |
| | g/dl | 4.65 | |
| Sodium | mmol/l | 163 | ISE method - indirect |
| Triglycerides | mmol/l | 2.83 | Lipase/GPO-PAP no correction |
| | mg/dl | 250 | |
| | mmol/l | 2.85 | Lipase/Glycerol Dehydrogenase |
| | mg/dl | 252 | |
| Urea | mmol/l | 21.9 | Urease kinetic |
| | mg/dl | 132 | |
| | mmol/l | 21.9 | BUN |
| | mg/dl | 61.5 | |
| Uric Acid (Urate) | mmol/l | 0.571 | Uricase peroxidase no ascorbate oxidase |
| | mg/dl | 9.59 | |
| | mmol/l | 0.567 | Spectrophotometric at 280-290 |
| | mg/dl | 9.53 | |



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