

|                                               | Method<br>Methode<br>Méthode<br>* 37°C         | SI Units<br>SI Einheiten<br>Unitades SI<br>Unités SI | Target<br>Sollwert<br>Valor meta<br>Valeur<br>souhaitée | Range<br>Bereich<br>Rango<br>Marge | Units<br>Einheiten<br>Unitades<br>Unités | Target<br>Sollwert<br>Valor meta<br>Valeur<br>souhaitée | Range<br>Bereich<br>Rango<br>Marge |
|-----------------------------------------------|------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|------------------------------------|------------------------------------------|---------------------------------------------------------|------------------------------------|
| <b>Human</b>                                  |                                                |                                                      |                                                         |                                    |                                          |                                                         |                                    |
| <b>Acid Phosphatase total</b>                 | $\alpha$ -Naphthylphosphate *                  | $\mu$ kat/l                                          | 0,20                                                    | 0,14 - 0,27                        | U/l                                      | 12,2                                                    | 8,17 - 16,2                        |
| <b>alpha-Amylase</b>                          | 2-chloro-4-nitrophenyl-maltotrioside (CNPG3) * | $\mu$ kat/l                                          | 12,8                                                    | 10,3 - 15,4                        | U/l                                      | 770                                                     | 616 - 924                          |
| <b>Alanine Aminotransferase (ALAT, GPT)</b>   | IFCC mod. *                                    | $\mu$ kat/l                                          | 2,38                                                    | 1,84 - 2,93                        | U/l                                      | 143                                                     | 110 - 176                          |
| <b>Albumin</b>                                | CRM 470 standardised                           | g/l                                                  | 45,6                                                    | 35,1 - 56,1                        | g/dl                                     | 4,56                                                    | 3,51 - 5,61                        |
| <b>Alkaline Phosphatase</b>                   | DGKC, DEA Buffer *                             | $\mu$ kat/l                                          | 8,55                                                    | 6,41 - 10,7                        | U/l                                      | 513                                                     | 385 - 641                          |
| <b>Alkaline Phosphatase</b>                   | IFCC, AMP Buffer *                             | $\mu$ kat/l                                          | 5,85                                                    | 4,39 - 7,31                        | U/l                                      | 351                                                     | 263 - 439                          |
| <b>Aspartate Aminotransferase (ASAT, GOT)</b> | IFCC mod. without pyridoxal phosphate *        | $\mu$ kat/l                                          | 2,52                                                    | 1,94 - 3,10                        | U/l                                      | 151                                                     | 116 - 186                          |
| <b>auto-Bilirubin direct</b>                  | DPD                                            | $\mu$ mol/l                                          | 45,8                                                    | 33,9 - 57,8                        | mg/dl                                    | 2,68                                                    | 1,98 - 3,38                        |
| <b>auto-Bilirubin total</b>                   | DPD                                            | $\mu$ mol/l                                          | 76,1                                                    | 56,3 - 95,9                        | mg/dl                                    | 4,45                                                    | 3,29 - 5,61                        |
| <b>Bilirubin direct</b>                       | Jendrassik-Gróf                                | $\mu$ mol/l                                          | 47,9                                                    | 35,4 - 60,3                        | mg/dl                                    | 2,80                                                    | 2,07 - 3,53                        |
| <b>Bilirubin total</b>                        | Jendrassik-Gróf                                | $\mu$ mol/l                                          | 74,2                                                    | 54,9 - 93,5                        | mg/dl                                    | 4,34                                                    | 3,21 - 5,47                        |
| <b>Bilirubin total</b>                        | 2,4 - Dichloroaniline DCA                      | $\mu$ mol/l                                          | 78,7                                                    | 58,2 - 99,1                        | mg/dl                                    | 4,60                                                    | 3,40 - 5,80                        |
| <b>Calcium</b>                                | o-Cresolphthalein complexone                   | mmol/l                                               | 3,23                                                    | 2,87 - 3,58                        | mg/dl                                    | 12,9                                                    | 11,5 - 14,3                        |
| <b>Chloride</b>                               | ISE (direct)                                   | mmol/l                                               | 125                                                     | 114 - 136                          | mg/dl                                    | 443                                                     | 403 - 483                          |
| <b>Chloride</b>                               | TPTZ*                                          | mmol/l                                               | 138                                                     | 126 - 150                          | mg/dl                                    | 489                                                     | 445 - 533                          |
| <b>Cholesterol total</b>                      | CHOD-PAP                                       | mmol/l                                               | 6,39                                                    | 5,49 - 7,28                        | mg/dl                                    | 247                                                     | 212 - 282                          |
| <b>Creatine Kinase<br/>CK NAC activated</b>   | DGKC optimised *                               | $\mu$ kat/l                                          | 8,45                                                    | 6,76 - 10,1                        | U/l                                      | 507                                                     | 406 - 608                          |
| <b>Creatine Kinase<br/>CK NAC liquiUV</b>     | IFCC mod.*                                     | $\mu$ kat/l                                          | 8,18                                                    | 6,55 - 9,82                        | U/l                                      | 491                                                     | 393 - 589                          |
| <b>Creatinine</b>                             | Jaffé, kinetic, without deproteinisation       | $\mu$ mol/l                                          | 451                                                     | 352 - 550                          | mg/dl                                    | 5,10                                                    | 3,98 - 6,22                        |
| <b>auto-Creatinine</b>                        | Jaffé, kinetic, without deproteinisation       | $\mu$ mol/l                                          | 415                                                     | 323 - 506                          | mg/dl                                    | 4,69                                                    | 3,66 - 5,72                        |
| <b>Creatinine enzymatic</b>                   | Enzymatic colorimetric test *                  | $\mu$ mol/l                                          | 453                                                     | 353 - 552                          | mg/dl                                    | 5,12                                                    | 3,99 - 6,25                        |
| <b>gamma-Glutamyl Transferase (GGT)</b>       | IFCC *                                         | $\mu$ kat/l                                          | 2,42                                                    | 1,89 - 2,95                        | U/l                                      | 145                                                     | 113 - 177                          |
| <b>Glucose liquiUV</b>                        | Hexokinase /G6P-DH                             | mmol/l                                               | 13,4                                                    | 11,2 - 15,5                        | mg/dl                                    | 241                                                     | 202 - 280                          |
| <b>Glucose liquicolor</b>                     | GOD-PAP                                        | mmol/l                                               | 13,3                                                    | 11,1 - 15,4                        | mg/dl                                    | 239                                                     | 201 - 277                          |
| <b>HDL-Cholesterol</b>                        | CHOD-PAP after precipitation                   | mmol/l                                               | 2,37                                                    | 1,90 - 2,84                        | mg/dl                                    | 91,6                                                    | 73,3 - 110                         |
| <b>HDL-Cholesterol liquicolor</b>             | Direct enzymatic test                          | mmol/l                                               | 2,48                                                    | 1,99 - 2,98                        | mg/dl                                    | 96                                                      | 76,8 - 115                         |
| <b>Iron</b>                                   | CAB                                            | $\mu$ mol/l                                          | 22,7                                                    | 19,6 - 25,9                        | $\mu$ g/dl                               | 127                                                     | 109 - 145                          |
| <b>Iron</b>                                   | TPTZ                                           | $\mu$ mol/l                                          | 31,1                                                    | 26,8 - 35,5                        | $\mu$ g/dl                               | 174                                                     | 150 - 198                          |
| <b>Lactate Dehydrogenase (LDH)</b>            | SCE mod. Pyruvate - Lactate *                  | $\mu$ kat/l                                          | 12,3                                                    | 10,1 - 14,5                        | U/l                                      | 737                                                     | 604 - 870                          |
| <b>LDL-Cholesterol</b>                        | Direct enzymatic test                          | mmol/l                                               | 3,05                                                    | 2,44 - 3,66                        | mg/dl                                    | 118                                                     | 94,4 - 142                         |
| <b>Lipase</b>                                 | Enzymatic colorimetric test *                  | $\mu$ kat/l                                          | 1,14                                                    | 0,91 - 1,37                        | U/l                                      | 68,4                                                    | 54,7 - 82,1                        |
| <b>Magnesium</b>                              | Xylidyl blue                                   | mmol/l                                               | 1,26                                                    | 1,06 - 1,46                        | mg/dl                                    | 3,06                                                    | 2,57 - 3,55                        |
| <b>Pancreas Amylase</b>                       | EPS-G7 *                                       | $\mu$ kat/l                                          | 3,93                                                    | 3,15 - 4,72                        | U/l                                      | 236                                                     | 189 - 283                          |
| <b>Phosphorus</b>                             | Phosphomolybdate                               | mmol/l                                               | 2,98                                                    | 2,45 - 3,52                        | mg/dl                                    | 9,24                                                    | 7,58 - 10,9                        |
| <b>Potassium</b>                              | ISE (direct)                                   | mmol/l                                               | 6,77                                                    | 6,09 - 7,45                        | mval/l                                   | 6,77                                                    | 6,09 - 7,45                        |
| <b>Potassium liquiUV</b>                      | Enzymatic UV Test                              | mmol/l                                               | 6,95                                                    | 6,26 - 7,65                        | mval/l                                   | 6,95                                                    | 6,26 - 7,65                        |
| <b>Potassium liquirapid</b>                   | Tetraphenylboron                               | mmol/l                                               | 6,61                                                    | 5,95 - 7,27                        | mval/l                                   | 6,61                                                    | 5,95 - 7,27                        |
| <b>Protein total</b>                          | Biuret                                         | g/l                                                  | 82,1                                                    | 73,1 - 91,1                        | g/dl                                     | 8,21                                                    | 7,31 - 9,11                        |
| <b>Sodium</b>                                 | ISE (direct)                                   | mmol/l                                               | 167                                                     | 150 - 184                          | mval/l                                   | 167                                                     | 150 - 184                          |
| <b>Sodium liquicolor</b>                      | Enzymatic colorimetric test                    | mmol/l                                               | 151                                                     | 136 - 166                          | mval/l                                   | 151                                                     | 136 - 166                          |
| <b>Sodium rapid</b>                           | Mg-uranylacetate                               | mmol/l                                               | 141                                                     | 127 - 155                          | mval/l                                   | 141                                                     | 127 - 155                          |
| <b>TIBC Total Iron<br/>Binding Capacity</b>   | Aluminum oxide adsorption CAB                  | $\mu$ mol/l                                          | 73,7                                                    | 59,0 - 88,5                        | $\mu$ g/dl                               | 412                                                     | 330 - 494                          |
| <b>TIBC Total Iron<br/>Binding Capacity</b>   | Aluminum oxide adsorption TPTZ                 | $\mu$ mol/l                                          | 88,2                                                    | 70,6 - 106                         | $\mu$ g/dl                               | 493                                                     | 394 - 592                          |
| <b>Triglycerides</b>                          | GPO-PAP                                        | mmol/l                                               | 2,69                                                    | 2,21 - 3,17                        | mg/dl                                    | 236                                                     | 194 - 278                          |
| <b>Urea liquicolor</b>                        | mod. Berthelot reaction                        | mmol/l                                               | 8,42                                                    | 6,57 - 10,3                        | mg/dl                                    | 50,6                                                    | 39,5 - 61,7                        |
| <b>Urea liquiUV</b>                           | Urease/GLDH                                    | mmol/l                                               | 8,81                                                    | 6,87 - 10,7                        | mg/dl                                    | 52,9                                                    | 41,3 - 64,5                        |
| <b>Uric Acid</b>                              | Uricase-PAP                                    | $\mu$ mol/l                                          | 545                                                     | 469 - 622                          | mg/dl                                    | 9,17                                                    | 7,89 - 10,5                        |
| <b>Uric Acid liquicolor plus</b>              | Uricase-PAP                                    | $\mu$ mol/l                                          | 613                                                     | 527 - 698                          | mg/dl                                    | 10,3                                                    | 8,86 - 11,7                        |

|                                        | Method<br>Methode<br>Método<br>Méthode<br>* 37°C | SI Units<br>SI Einheiten<br>Unitades SI<br>Unités SI | Target<br>Sollwert<br>Valor meta<br>Valeur<br>souhaitée | Range<br>Bereich<br>Rango<br>Marge | Units<br>Einheiten<br>Unitades<br>Unités | Target<br>Sollwert<br>Valor meta<br>Valeur<br>souhaitée | Range<br>Bereich<br>Rango<br>Marge |
|----------------------------------------|--------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|------------------------------------|------------------------------------------|---------------------------------------------------------|------------------------------------|
| <b>Other Manufacturers</b>             |                                                  |                                                      |                                                         |                                    |                                          |                                                         |                                    |
| Acid Phosphatase                       | a-Naphtylphosphat                                | µkat/l                                               | 0,22                                                    | 0,16 - 0,27                        | U/l                                      | 13,0                                                    | 9,75 - 16,3                        |
| alpha-Amylase                          | EPS-G7, IFCC *                                   | µkat/l                                               | 4,53                                                    | 3,63 - 5,44                        | U/l                                      | 272                                                     | 218 - 326                          |
| Alanine Aminotransferase (ALAT, GPT)   | IFCC *                                           | µkat/l                                               | 2,23                                                    | 1,72 - 2,75                        | U/l                                      | 134                                                     | 103 - 165                          |
| Albumin                                | CRM470 standardised                              | g/l                                                  | 43,0                                                    | 33,1 - 52,9                        | g/dl                                     | 4,30                                                    | 3,31 - 5,29                        |
| Alkaline Phosphatase                   | IFCC *                                           | µkat/l                                               | 4,18                                                    | 3,14 - 5,23                        | U/l                                      | 251                                                     | 188 - 314                          |
| Aspartate Aminotransferase (ASAT, GOT) | IFCC *                                           | µkat/l                                               | 2,42                                                    | 1,86 - 2,97                        | U/l                                      | 145                                                     | 112 - 178                          |
| Bilirubin direct                       | Jendrassik-Gróf                                  | µmol/l                                               | 46,2                                                    | 34,2 - 58,2                        | mg/dl                                    | 2,70                                                    | 2,00 - 3,40                        |
| Bilirubin total                        | Jendrassik-Gróf                                  | µmol/l                                               | 75,8                                                    | 56,1 - 95,5                        | mg/dl                                    | 4,43                                                    | 3,28 - 5,58                        |
| Calcium                                | o-Cresolphthalein                                | mmol/l                                               | 3,19                                                    | 2,84 - 3,54                        | mg/dl                                    | 12,8                                                    | 11,4 - 14,2                        |
| Chloride                               | ISE                                              | mmol/l                                               | 116                                                     | 106 - 126                          | mg/dl                                    | 411                                                     | 374 - 448                          |
| Cholesterol total                      | CHOD-PAP                                         | mmol/l                                               | 6,41                                                    | 5,52 - 7,31                        | mg/dl                                    | 248                                                     | 213 - 283                          |
| Copper                                 | AAS                                              | µmol/l                                               | 18,1                                                    | 14,5 - 21,7                        | µg/dl                                    | 115                                                     | 92 - 138                           |
| Creatine Kinase                        | NAC activated, IFCC *                            | µkat/l                                               | 8,40                                                    | 6,72 - 10,1                        | U/l                                      | 504                                                     | 403 - 605                          |
| Creatinine                             | Jaffé kinetic                                    | µmol/l                                               | 449                                                     | 350 - 548                          | mg/dl                                    | 5,08                                                    | 3,96 - 6,20                        |
| gamma-Glutamyl Transferase (GGT)       | γ-Glutamyl-4-nitroanilide *                      | µkat/l                                               | 2,25                                                    | 1,76 - 2,75                        | U/l                                      | 135                                                     | 105 - 165                          |
| Glucose                                | Hexokinase /G6P-DH                               | mmol/l                                               | 13,0                                                    | 11,0 - 15,1                        | mg/dl                                    | 235                                                     | 197 - 273                          |
| HDL-Cholesterol                        | Direct enzymatic test                            | mmol/l                                               | 2,50                                                    | 2,00 - 3,00                        | mg/dl                                    | 96,7                                                    | 77,4 - 116                         |
| Iron                                   | Ferrozine                                        | µmol/l                                               | 28,8                                                    | 24,8 - 32,9                        | µg/dl                                    | 161                                                     | 138 - 184                          |
| Lactate Dehydrogenase (LDH)            | IFCC Lactate - Pyruvate *                        | µkat/l                                               | 5,43                                                    | 4,46 - 6,41                        | U/l                                      | 326                                                     | 267 - 385                          |
| LDL-Cholesterol                        | Direct enzymatic test                            | mmol/l                                               | 2,87                                                    | 2,30 - 3,44                        | mg/dl                                    | 111                                                     | 88,8 - 133                         |
| Lipase                                 | Enzymatic colorimetric test *                    | µkat/l                                               | 1,25                                                    | 1,00 - 1,50                        | U/l                                      | 74,8                                                    | 59,8 - 89,8                        |
| Lithium                                | AAS                                              | mmol/l                                               | 2,19                                                    | 1,88 - 2,50                        | mval/l                                   | 2,19                                                    | 1,9 - 2,5                          |
| Magnesium                              | Xylydyl blue                                     | mmol/l                                               | 1,31                                                    | 1,10 - 1,52                        | mg/dl                                    | 3,18                                                    | 2,7 - 3,7                          |
| Pancreas Amylase                       | EPS *                                            | µkat/l                                               | 3,95                                                    | 3,16 - 4,74                        | U/l                                      | 237                                                     | 190 - 284                          |
| Phosphorus                             | Molybdate UV                                     | mmol/l                                               | 2,82                                                    | 2,31 - 3,33                        | mg/dl                                    | 8,73                                                    | 7,16 - 10,30                       |
| Potassium                              | ISE (indirect)                                   | mmol/l                                               | 6,50                                                    | 5,85 - 7,15                        | mval/l                                   | 6,50                                                    | 5,85 - 7,15                        |
| Protein total                          | Biuret                                           | g/l                                                  | 69,0                                                    | 61,4 - 76,6                        | g/dl                                     | 6,90                                                    | 6,14 - 7,66                        |
| Sodium                                 | ISE (indirect)                                   | mmol/l                                               | 152                                                     | 137 - 167                          | mval/l                                   | 152                                                     | 137 - 167                          |
| Triglycerides                          | GPO-PAP                                          | mmol/l                                               | 2,66                                                    | 2,18 - 3,13                        | mg/dl                                    | 233                                                     | 191 - 275                          |
| Urea                                   | Urease                                           | mmol/l                                               | 8,0                                                     | 6,26 - 9,79                        | mg/dl                                    | 48,2                                                    | 37,6 - 58,8                        |
| Uric Acid                              | Enzymatic colorimetric test                      | µmol/l                                               | 619                                                     | 532 - 705                          | mg/dl                                    | 10,4                                                    | 8,94 - 11,86                       |
| Zinc                                   | AAS                                              | µmol/l                                               | 11,5                                                    | 9,20 - 13,8                        | µg/dl                                    | 75,2                                                    | 60,2 - 90,2                        |

**REF** 13151      **LOT** 0004

Target Values / Sollwerte / Valores Meta/ Valeurs Souhaitées

|                           | Units<br>Einheiten<br>Unitades<br>Unités | Target<br>Sollwert<br>Valor meta<br>Valeur<br>souhaitée | Range<br>Bereich<br>Rango<br>Marge |
|---------------------------|------------------------------------------|---------------------------------------------------------|------------------------------------|
| <b>Human Turbidimetry</b> |                                          |                                                         |                                    |
| <b>Apolipoprotein A1</b>  | mg/dl                                    | 138                                                     | 110 - 166                          |
| <b>Apolipoprotein B</b>   | mg/dl                                    | 95,8                                                    | 76,6 - 115                         |
| <b>IgA direct</b>         | mg/dl                                    | 194                                                     | 147 - 241                          |
| <b>IgG direct</b>         | mg/dl                                    | 1048                                                    | 838 - 1258                         |
| <b>IgM direct</b>         | mg/dl                                    | 81,6                                                    | 58,8 - 104                         |
| <b>Lipoprotein (a)</b>    | mg/dl                                    | 11,4                                                    | 9,12 - 13,7                        |

| <b>Roche Diagnostics Turbidimetry</b> |       |      |             |
|---------------------------------------|-------|------|-------------|
| <b>Apolipoprotein A1</b>              | mg/dl | 143  | 114 - 172   |
| <b>Apolipoprotein B</b>               | mg/dl | 82,0 | 65,6 - 98,4 |
| <b>Haptoglobin</b>                    | mg/dl | 128  | 98,6 - 157  |
| <b>IgA</b>                            | mg/dl | 200  | 152 - 248   |
| <b>IgG</b>                            | mg/dl | 1006 | 805 - 1207  |
| <b>IgM</b>                            | mg/dl | 87,0 | 62,6 - 111  |
| <b>Lipoproteine(a)</b>                | mg/dl | 22,0 | 17,6 - 26,4 |

| <b>Olympus Turbidimetry</b> |       |      |             |
|-----------------------------|-------|------|-------------|
| <b>Apolipoprotein A1</b>    | mg/dl | 165  | 132 - 198   |
| <b>Apolipoprotein B</b>     | mg/dl | 73,0 | 58,4 - 87,6 |
| <b>Haptoglobin</b>          | mg/dl | 116  | 89,3 - 143  |
| <b>IgA</b>                  | mg/dl | 206  | 157 - 255   |
| <b>IgG</b>                  | mg/dl | 987  | 790 - 1184  |
| <b>IgM</b>                  | mg/dl | 75,0 | 54,0 - 96,0 |
| <b>Lipoproteine(a)</b>      | mg/dl | 14,0 | 11,2 - 16,8 |

| <b>Protein Fractions</b>                                 |   |      |             |
|----------------------------------------------------------|---|------|-------------|
| <b>Electrophoresis with cellulose foil Ponceau S dye</b> |   |      |             |
| Albumin                                                  | % | 59,4 | 47,5 - 71,3 |
| α1-Globulin                                              | % | 4,40 | 3,08 - 5,72 |
| α2-Globulin                                              | % | 9,80 | 7,84 - 11,8 |
| β-Globulin                                               | % | 11,7 | 9,36 - 14,0 |
| γ-Globulin                                               | % | 14,8 | 10,1 - 19,5 |