Supplemental Table 1. Analytical performance of immunoassays on the Roche Cobas 8000 e602 immunology analyzer (SI units).

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| **Analyte** | **Control Level 1** | **Control Level 2** | **Analytical Measuring Range** | **Test Type** | | **Reference Material/Method** |
| AFP, µg/L |  |  | 0.605-1210 | Electrochemiluminescence immunoassay | 1st IRP WHO Reference Standard 72/225 | |
| Mean Concentration | 11.3 | 126 |  |
| SD | 0.25 | 3.01 |  |
| CV, % | 2.2 | 2.4 |  |
| Cortisol, nmol/L |  |  | 1.5‑1750 | Electrochemiluminescence immunoassay | IRMM IFCC‑451 panel via ID‑GC/MS, | |
| Mean Concentration | 310 | 734 |  |
| SD | 4.91 | 12.2 |  |
| CV, % | 1.6 | 1.7 |  |  |
| Estradiol, pmol/L |  |  | 18.4‑11010 | Electrochemiluminescence immunoassay | CRM 6004a via ID‑GC/MS | |
| Mean Concentration | 329 | 1497 |  |
| SD | 7.82 | 18.0 |  |
| CV, % | 2.4 | 1.2 |  |  |  | |
| Ferritin, pmol/L |  |  | 1.124- 4494 | Electrochemiluminescence immunoassay | 1st International Standard NIBSC “Reagent for Ferritin (human liver)” 80/602 & Internal Reference Material. | |
| Mean Concentration | 314.6 | 2022 |  |
| SD | 5.191 | 32.36 |  |  |
| CV, % | 3.820 | 3.595 |  |  |
| Folate, nmol/L |  |  | 1.36‑45.4 | Binding assay | WHO International Standard NIBSC code: 03/178. | |
| Mean Concentration | 5.31 | 22.9 |  |
| SD | 0.429 | 1.01 |  |  |
| CV, % | 8.1 | 4.4 |  |  |
| FSH, IU/L |  |  | 0.100‑200 | Electrochemiluminescence immunoassay | Enzymun-Test FSH Method & 2nd IRP WHO reference standard 78/549 | |
| Mean Concentration | 9.53 | 24.6 |  |
| SD | 0.14 | 0.31 |  |  |
| CV, % | 1.5 | 1.3 |  |  |  | |
| FT3, pmol/L |  |  | 0.4‑50 pmol/L | Electrochemiluminescence immunoassay | Internal Reference Material | |
| Mean Concentration | 5.67 | 23.4 |  |  | |
| SD | 0.121 | 0.349 |  |  | |
| CV, % | 2.1 | 1.5 |  |  |  | |
| FT4, pmol/L |  |  | 0.5‑100 pmol/L | Electrochemiluminescence immunoassay | Internal Reference Material | |
| Mean Concentration | 15.3 | 39.0 |  |  | |
| SD | 0.173 | 0.695 |  |  | |
| CV, % | 1.1 | 1.8 |  |  |  | |
| LH, IU/L |  |  | 0.100-200 | Electrochemiluminescence immunoassay | 2nd International Standard (NIBSC) 80/552 | |
| Mean Concentration | 6.67 | 54.6 |  |
| SD | 0.05 | 0.35 |  |
| CV, % | 0.8 | 0.6 |  |
| Prolactin, mIU/L |  |  | 1.00‑10000 | Electrochemiluminescence immunoassay | 3rd IRP WHO Reference Standard 84/500 | |
| Mean Concentration | 162 | 613 |  |
| SD | 1.44 | 5.10 |  |  |
| CV, % | 0.9 | 0.8 |  |  |  | |
| Progesterone, nmol/L |  |  | 0.159‑191 | Electrochemiluminescence immunoassay | Internal Reference Material | |
| Mean Concentration | 24.9 | 50.8 |  |
| SD | 0.566 | 1.27 |  |
| CV, % | 2.3 | 2.5 |  |  |
| PTH, pmol/L |  |  | 0.127‑530 | Electrochemiluminescence immunoassay | Commercial PTH test (RIA) | |
| Mean Concentration | 5.80 | 19.5 |  |
| SD | 0.100 | 0.281 |  |
| CV, % | 1.7 | 1.4 |  |  | |
| SHBG, nmol/L |  |  | 0.350‑200 | Electrochemiluminescence immunoassay | 1st International Standard for SHBG from NIBSC code 95/560 | |
| Mean Concentration | 35.3 | 19.2 |  |
| SD | 0.46 | 0.21 |  |
| CV, % | 1.3 | 1.1 |  |
| Testosterone, nmol/L |  |  | 0.087‑52.0 | Electrochemiluminescence immunoassay | ID‑GC/MS | |
| Mean Concentration | 21.1 | 8.88 |  |
| SD | 0.625 | 0.229 |  |  | |
| CV, % | 2.9 | 2.6 |  |  |  | |
| TSH, mIU/L |  |  | 0.005-100 | Electrochemiluminescence immunoassay | 2nd IRP WHO Reference Standard 80/558 | |
| Mean Concentration | 0.959 | 8.13 |  |
| SD | 0.014 | 0.098 |  |
| CV, % | 1.5 | 1.2 |  |
| TT3, nmol/L |  |  | 0.300‑10.0 | Electrochemiluminescence immunoassay | Internal Reference Material | |
| Mean Concentration | 2.36 | 5.83 |  |
| SD | 0.03 | 0.07 |  |
| CV, % | 1.3 | 1.3 |  |
| Vitamin B12, pmol/L |  |  | 36.9‑1476 | Electrochemiluminescence immunoassay | Internal Reference Material | |
| Mean Concentration | 331 | 677 |  |
| SD | 5.28 | 8.86 |  |
| CV, % | 1.6 | 1.3 |  |  |  | |

CRM: Certified Reference Material, ID-GC/MS: isotope dilution gas chromatography/mass spectroscopy, IRMM: Institute for Reference Materials and Measurement, IRP: International Reference Preparations, NIBSC: National Institute for Biological Standards and Control, RIA: radioimmunoassay, WHO: World Health Organization.