

EQA round: TE1/25 - Trace Elements

Deadline: 4.3.2025

Setup: all data

| | | |
|---|--|---|
| RoM = robust average | AV = assigned value | D _{max} = acceptable difference |
| SD = standard deviation | CVE = consensus of the experts | LL = lower limit |
| CV = coefficient of variation | U _{AV} = expanded uncertainty of the assigned value (k = 2) | UL = upper limit |
| N _{tot} = total number of the results | | N _{eva} = number of the results assessed |
| N _{out} = number of the results removed before calculation | | N _{suc} = number of successful results |
| | | S _{rel} = relative success |

| Test Sample Group | [unit] | RoM | SD | CV [%] | N _{tot} | N _{out} | Comparability | | | | | N _{eva} | N _{suc} | S _{rel} [%] |
|-----------------------|----------|-------|-------|--------|------------------|------------------|---------------|-----------------|------------------|-----|-------|------------------|------------------|----------------------|
| | | | | | | | AV | U _{AV} | D _{max} | LL | UL | | | |
| Set 1 (plasma) | | | | | | | | | | | | | | |
| (361) Al - plasma | [μmol/L] | | | | 1 | | | | | | | 1 | 1 | 100 |
| Sample A1 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 2,97 | | | 1 | 0 | CVE | 2,68 | 0,28 | 25% | 2,01 | 3,35 | 1 | |
| Sample B1 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 3,28 | | | 1 | 0 | CVE | 2,97 | 0,28 | 25% | 2,22 | 3,72 | 1 | |
| (360) Co - plasma | [nmol/L] | | | | 1 | | | | | | | 1 | 1 | 100 |
| Sample A1 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 169 | | | 1 | 0 | CVE | 180 | 14 | 25% | 135 | 225 | 1 | |
| Sample B1 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 417 | | | 1 | 0 | CVE | 453 | 33 | 25% | 339 | 567 | 1 | |
| (357) Cr - plasma | [nmol/L] | | | | 2 | | | | | | | 2 | 2 | 100 |
| Sample A1 | | | | | | | | | | | | 2 | 2 | 100 |
| All results | | 122 | 0,75 | 0,62 | 2 | 0 | CVE | 121 | 16 | 25% | 90,7 | 152 | 2 | |
| Sample B1 | | | | | | | | | | | | 2 | 2 | 100 |
| All results | | 552 | 17 | 3,1 | 2 | 0 | CVE | 575 | 69 | 25% | 431 | 719 | 2 | |
| (351) Cu - plasma | [μmol/L] | | | | 26 | | | | | | | 26 | 25 | 96 |
| Sample A1 | | | | | | | | | | | | 26 | 26 | 100 |
| All results | | 12,7 | 1,3 | 10 | 26 | 0 | CVE | 12,6 | 1,1 | 25% | 9,45 | 15,8 | 26 | |
| Sample B1 | | | | | | | | | | | | 26 | 25 | 96 |
| All results | | 22 | 2,3 | 10 | 26 | 0 | CVE | 22,6 | 1,7 | 25% | 16,9 | 28,3 | 26 | |
| (359) Mg - plasma | [mmol/L] | | | | 6 | | | | | | | 6 | 6 | 100 |
| Sample A1 | | | | | | | | | | | | 6 | 6 | 100 |
| All results | | 0,725 | 0,007 | 1 | 6 | 0 | CVE | 0,749 | 0,049 | 25% | 0,561 | 0,937 | 6 | |
| Sample B1 | | | | | | | | | | | | 6 | 6 | 100 |
| All results | | 1,25 | 0,015 | 1,2 | 6 | 0 | CVE | 1,3 | 0,074 | 25% | 0,975 | 1,63 | 6 | |
| (352) Mn - plasma | [nmol/L] | | | | 3 | | | | | | | 3 | 3 | 100 |
| Sample A1 | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 205 | 3,5 | 1,7 | 3 | 0 | CVE | 211 | 22 | 25% | 158 | 264 | 3 | |
| Sample B1 | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 614 | 12 | 2 | 3 | 0 | CVE | 659 | 62 | 25% | 494 | 824 | 3 | |
| (355) Se - plasma | [μmol/L] | | | | 5 | | | | | | | 5 | 5 | 100 |
| Sample A1 | | | | | | | | | | | | 5 | 5 | 100 |
| All results | | 0,995 | 0,082 | 8,2 | 5 | 0 | CVE | 1,01 | 0,11 | 25% | 0,757 | 1,27 | 5 | |
| Sample B1 | | | | | | | | | | | | 5 | 5 | 100 |
| All results | | 1,58 | 0,13 | 8,1 | 5 | 0 | CVE | 1,58 | 0,14 | 25% | 1,18 | 1,98 | 5 | |
| (350) Zn - plasma | [μmol/L] | | | | 26 | | | | | | | 26 | 23 | 88 |
| Sample A1 | | | | | | | | | | | | 26 | 24 | 92 |
| All results | | 23,8 | 1,7 | 7 | 26 | 0 | CVE | 24,7 | 1,9 | 25% | 18,5 | 30,9 | 26 | |
| Sample B1 | | | | | | | | | | | | 26 | 23 | 88 |
| All results | | 39,1 | 3,7 | 9,4 | 26 | 0 | CVE | 40,6 | 2,6 | 25% | 30,4 | 50,8 | 26 | |
| Set 2 (blood) | | | | | | | | | | | | | | |
| (353) Cd - blood | [nmol/L] | | | | 3 | | | | | | | 3 | 3 | 100 |
| Sample A2 | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 22,8 | 1,9 | 8,3 | 3 | 0 | CVE | 24,4 | 2,5 | 25% | 18,3 | 30,5 | 3 | |
| Sample B2 | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 48 | 4,9 | 10 | 3 | 0 | CVE | 52,8 | 3,2 | 25% | 39,6 | 66 | 3 | |
| (356) Hg - blood | [nmol/L] | | | | 1 | | | | | | | 1 | 1 | 100 |
| Sample A2 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 30,4 | | | 1 | 0 | CVE | 28,4 | 4 | 25% | 21,3 | 35,5 | 1 | |
| Sample B2 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 62,8 | | | 1 | 0 | CVE | 59,8 | 9 | 25% | 44,8 | 74,8 | 1 | |
| (339) Mn - blood | [nmol/L] | | | | 1 | | | | | | | 1 | 1 | 100 |
| Sample A2 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 259 | | | 1 | 0 | CVE | 215 | 22 | 25% | 161 | 269 | 1 | |
| Sample B2 | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 277 | | | 1 | 0 | CVE | 258 | 25 | 25% | 193 | 323 | 1 | |
| (354) Pb - blood | [nmol/L] | | | | 7 | | | | | | | 7 | 6 | 86 |
| Sample A2 | | | | | | | | | | | | 7 | 6 | 86 |
| All results | | 535 | 46 | 8,5 | 7 | 0 | CVE | 551 | 53 | 25% | 413 | 689 | 7 | |
| Sample B2 | | | | | | | | | | | | 7 | 7 | 100 |
| All results | | 1810 | 100 | 5,7 | 7 | 0 | CVE | 1850 | 130 | 25% | 1380 | 2320 | 7 | |

EQA round: TE1/25 - Trace Elements

Deadline: 4.3.2025

Setup: all data

| Test Sample Group | [unit] | RoM | SD | CV [%] | N _{tot} | N _{out} | Comparability | | | | | N _{eva} | N _{suc} | S _{rel} [%] | |
|-------------------------|----------|-------|-------|-----------|------------------|------------------|---------------|-----------------|------------------|-----|-------|------------------|------------------|-------------------------|-----|
| | | | | | | | AV | U _{AV} | D _{max} | LL | UL | | | | |
| Set 3 (urine) | | | | | | | | | | | | | | | |
| (348) Al - urine | [µmol/L] | | | | 1 | | | | | | | | 1 | 1 | 100 |
| Sample A3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 0,254 | | | 1 | 0 | CVE | 0,23 | 0,044 | 25% | 0,172 | 0,288 | 1 | | |
| Sample B3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 0,928 | | | 1 | 0 | CVE | 0,856 | 0,13 | 25% | 0,642 | 1,07 | 1 | | |
| (343) Cd - urine | [nmol/L] | | | | 4 | | | | | | | | 4 | 4 | 100 |
| Sample A3 | | | | | | | | | | | | | 4 | 4 | 100 |
| All results | | 21,8 | 1,7 | 8 | 4 | 0 | CVE | 21,9 | 2 | 25% | 16,4 | 27,4 | 4 | | |
| Sample B3 | | | | | | | | | | | | | 4 | 4 | 100 |
| All results | | 62,2 | 6 | 9,7 | 4 | 0 | CVE | 63,6 | 5,9 | 25% | 47,7 | 79,5 | 4 | | |
| (347) Cr - urine | [nmol/L] | | | | 3 | | | | | | | | 3 | 3 | 100 |
| Sample A3 | | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 75,9 | 2,1 | 2,8 | 3 | 0 | CVE | 78,8 | 7,7 | 25% | 59,1 | 98,5 | 3 | | |
| Sample B3 | | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 336 | 14 | 4,2 | 3 | 0 | CVE | 358 | 31 | 25% | 268 | 448 | 3 | | |
| (341) Cu - urine | [µmol/L] | | | | 8 | | | | | | | | 8 | 5 | 63 |
| Sample A3 | | | | | | | | | | | | | 8 | 5 | 63 |
| All results | | 0,286 | 0,095 | 33 | 8 | 0 | CVE | 0,256 | 0,028 | 25% | 0,192 | 0,32 | 8 | | |
| Sample B3 | | | | | | | | | | | | | 8 | 6 | 75 |
| All results | | 0,733 | 0,11 | 16 | 8 | 0 | CVE | 0,762 | 0,066 | 25% | 0,571 | 0,953 | 8 | | |
| (346) Hg - urine | [nmol/L] | | | | 1 | | | | | | | | 1 | 1 | 100 |
| Sample A3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 9,47 | | | 1 | 0 | CVE | 12 | 3 | 25% | 9 | 15 | 1 | | |
| Sample B3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 97,2 | | | 1 | 0 | CVE | 111 | 18 | 25% | 83,2 | 139 | 1 | | |
| (362) I - urine | [µmol/L] | | | | 1 | | | | | | | | 1 | 1 | 100 |
| Sample A3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 0,548 | | | 1 | 0 | CVE | 0,481 | 0,039 | 25% | 0,36 | 0,602 | 1 | | |
| Sample B3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 1 | | | 1 | 0 | CVE | 0,916 | 0,068 | 25% | 0,687 | 1,15 | 1 | | |
| (342) Mn - urine | [nmol/L] | | | | 2 | | | | | | | | 2 | 2 | 100 |
| Sample A3 | | | | | | | | | | | | | 2 | 2 | 100 |
| All results | | 39,5 | 0,28 | 0,71 | 2 | 0 | CVE | 38,2 | 3,6 | 25% | 28,6 | 47,8 | 2 | | |
| Sample B3 | | | | | | | | | | | | | 2 | 2 | 100 |
| All results | | 188 | 4,1 | 2,2 | 2 | 0 | CVE | 191 | 18 | 25% | 143 | 239 | 2 | | |
| (358) Ni - urine | [nmol/L] | | | | 3 | | | | | | | | 3 | 2 | 67 |
| Sample A3 | | | | | | | | | | | | | 3 | 2 | 67 |
| All results | | 89,5 | 46 | 51 | 3 | 0 | CVE | 61,3 | 10 | 25% | 45,9 | 76,7 | 3 | | |
| Sample B3 | | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 324 | 13 | 3,9 | 3 | 0 | CVE | 344 | 37 | 25% | 258 | 430 | 3 | | |
| (344) Pb - urine | [nmol/L] | | | | 3 | | | | | | | | 3 | 3 | 100 |
| Sample A3 | | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 13,2 | 0,69 | 5,2 | 3 | 0 | CVE | 12,8 | 1,8 | 25% | 9,6 | 16 | 3 | | |
| Sample B3 | | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 105 | 6 | 5,7 | 3 | 0 | CVE | 102 | 12 | 25% | 76,5 | 128 | 3 | | |
| (345) Se - urine | [µmol/L] | | | | 1 | | | | | | | | 1 | 1 | 100 |
| Sample A3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 0,387 | | | 1 | 0 | CVE | 0,381 | 0,056 | 25% | 0,285 | 0,477 | 1 | | |
| Sample B3 | | | | | | | | | | | | | 1 | 1 | 100 |
| All results | | 2,31 | | | 1 | 0 | CVE | 2,49 | 0,29 | 25% | 1,86 | 3,12 | 1 | | |
| (340) Zn - urine | [µmol/L] | | | | 3 | | | | | | | | 3 | 3 | 100 |
| Sample A3 | | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 3,7 | 0,07 | 1,9 | 3 | 0 | CVE | 3,78 | 0,37 | 25% | 2,83 | 4,73 | 3 | | |
| Sample B3 | | | | | | | | | | | | | 3 | 3 | 100 |
| All results | | 9,41 | 0,14 | 1,4 | 3 | 0 | CVE | 9,71 | 0,83 | 25% | 7,28 | 12,2 | 3 | | |