**Summary of Participant Performance (Mean and Standard Deviation)**

**Glucose (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 176.1 ± 4.65 | 330.1 ± 8.08 | 49.1 ± 1.95 | 111.2 ± 2.71 | 95.4 ± 2.56 | n = 393 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 175.9 ± 2.05 | 325.8 ± 3.23 | 54.0 ± 0.90 | 114.7 ± 1.37 | 98.7 ± 1.37 | n = 3 | [AXA] Abaxis Piccolo |
| 174.0 ± 1.36 | 336.0 ± 2.83 | 47.5 ± 0.65 | 109.9 ± 0.88 | 94.7 ± 0.84 | n = 14 | [ABJ] Abbott Architect c System |
| 173.3 ± 3.63 | 328.7 ± 7.26 | 48.5 ± 1.48 | 110.3 ± 2.89 | 94.9 ± 2.26 | n = 52 | [OLC] Beckman Coulter AU Chemistry System |
| 173.1 ± 5.99 | 322.6 ± 12.37 | 47.6 ± 2.22 | 109.1 ± 1.70 | 95.3 ± 3.29 | n = 10 | [BCS] Beckman Coulter CX |
| 174.6 ± 5.24 | 330.0 ± 5.50 | 48.7 ± 3.18 | 111.1 ± 3.86 | 94.9 ± 2.24 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 174.9 ± 4.97 | 329.0 ± 6.99 | 49.7 ± 1.86 | 110.7 ± 3.52 | 95.6 ± 2.38 | n = 19 | [BCG] Beckman Coulter UniCel DxC 600 |
| 175.3 ± 4.64 | 328.8 ± 5.68 | 48.4 ± 1.58 | 110.2 ± 2.42 | 94.4 ± 2.39 | n = 22 | [BCH] Beckman Coulter UniCel DxC 800 |
| 184.7 ± 5.82 | 357.5 ± 1.94 | 65.7 ± 0.90 | 123.5 ± 4.08 | 111.2 ± 3.42 | n = 4 | [HEB] HemoCue B-Glucose |
| 196.8 ± 1.54 | 368.0 ± 5.48 | 74.4 ± 1.02 | 137.2 ± 3.23 | 124.4 ± 2.56 | n = 3 | [HEC] HemoCue Glucose 201 |
| 180.2 ± 1.37 | 342.3 ± 5.12 | 49.8 ± 1.20 | 112.8 ± 1.04 | 97.9 ± 0.85 | n = 8 | [IAA] i-STAT |
| 179.3 ± 3.33 | 328.0 ± 5.66 | 47.6 ± 1.05 | 111.1 ± 1.96 | 93.7 ± 1.93 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 179.5 ± 4.17 | 330.6 ± 6.66 | 47.4 ± 1.19 | 110.1 ± 2.51 | 92.6 ± 2.05 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 177.1 ± 4.23 | 326.2 ± 7.64 | 46.8 ± 0.91 | 109.4 ± 2.72 | 91.7 ± 2.14 | n = 6 | [JJG] Ortho Vitros 5600 |
| 177.0 ± 2.76 | 334.0 ± 6.12 | 49.6 ± 0.85 | 112.3 ± 2.40 | 96.7 ± 1.96 | n = 14 | [ROC] Roche cobas c501 |
| 175.9 ± 3.78 | 330.1 ± 7.06 | 48.6 ± 0.89 | 110.9 ± 1.71 | 95.8 ± 1.36 | n = 16 | [ROT] Roche Cobas INTEGRA |
| 176.5 ± 4.30 | 334.1 ± 9.22 | 49.2 ± 1.26 | 111.4 ± 2.68 | 96.1 ± 2.54 | n = 37 | [ROD] Roche MODULAR D/P |
| 175.2 ± 2.45 | 332.0 ± 4.11 | 49.0 ± 0.00 | 111.2 ± 1.28 | 95.4 ± 1.33 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 175.2 ± 4.10 | 330.7 ± 7.58 | 48.6 ± 1.02 | 109.7 ± 4.06 | 94.7 ± 3.16 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 178.5 ± 2.95 | 330.5 ± 5.37 | 51.1 ± 0.96 | 112.5 ± 1.35 | 96.9 ± 1.26 | n = 12 | [DUE] Siemens Dimension EXL |
| 177.6 ± 2.90 | 329.0 ± 4.87 | 50.7 ± 1.87 | 112.4 ± 1.68 | 96.5 ± 1.97 | n = 36 | [DUR] Siemens Dimension RxL |
| 172.5 ± 4.62 | 319.6 ± 7.96 | 49.9 ± 1.59 | 110.3 ± 2.41 | 94.5 ± 2.47 | n = 29 | [DUT] Siemens Dimension Vista |
| 178.2 ± 4.09 | 330.4 ± 6.37 | 51.1 ± 1.51 | 113.2 ± 2.69 | 96.8 ± 2.26 | n = 21 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 175.9 ± 2.05 | 325.8 ± 3.23 | 54.0 ± 0.90 | 114.7 ± 1.37 | 98.7 ± 1.37 | n = 3 | [AX1] Abaxis |
| 174.0 ± 1.36 | 336.0 ± 2.83 | 47.5 ± 0.65 | 109.9 ± 0.88 | 94.7 ± 0.84 | n = 14 | [AB1] Abbott |
| 174.6 ± 5.07 | 328.4 ± 7.30 | 48.8 ± 2.07 | 110.5 ± 2.97 | 94.9 ± 2.50 | n = 61 | [BC1] Beckman Coulter |
| 173.2 ± 3.44 | 328.8 ± 7.00 | 48.4 ± 1.38 | 110.1 ± 2.83 | 94.7 ± 2.23 | n = 48 | [OL1] Beckman Coulter AU Series |
| 176.7 ± 6.10 | 331.0 ± 9.46 | 49.2 ± 3.05 | 111.3 ± 3.42 | 96.8 ± 3.07 | n = 6 | [CR1] Carolina |
| 190.2 ± 8.06 | 361.1 ± 6.37 | 69.2 ± 4.87 | 129.2 ± 8.20 | 116.8 ± 8.05 | n = 7 | [HE1] HemoCue |
| 180.2 ± 1.51 | 343.3 ± 4.25 | 49.5 ± 1.14 | 112.8 ± 1.12 | 97.7 ± 0.74 | n = 7 | [IA1] i-STAT thermal cartridge |
| 180.8 ± 9.43 | 334.3 ± 22.10 | 52.3 ± 3.07 | 113.5 ± 5.43 | 90.2 ± 12.34 | n = 3 | [JA1] JAS Diagnostics |
| 179.0 ± 4.02 | 329.0 ± 6.60 | 47.4 ± 1.13 | 110.3 ± 2.42 | 92.8 ± 2.12 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 176.8 ± 2.90 | 333.4 ± 6.24 | 49.5 ± 0.92 | 112.1 ± 2.41 | 96.6 ± 1.96 | n = 15 | [RO4] Roche cobas c311/c501/c502/c701 |
| 176.6 ± 4.33 | 334.3 ± 9.17 | 49.3 ± 1.30 | 111.5 ± 2.69 | 96.2 ± 2.56 | n = 38 | [RO2] Roche Hitachi and Modular D/P |
| 175.9 ± 3.78 | 330.1 ± 7.06 | 48.6 ± 0.89 | 110.9 ± 1.71 | 95.8 ± 1.36 | n = 16 | [RO1] Roche Integra and MIRA |
| 175.7 ± 2.81 | 332.0 ± 4.92 | 49.1 ± 0.80 | 111.7 ± 1.66 | 95.8 ± 1.59 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 176.6 ± 4.42 | 327.3 ± 7.43 | 50.6 ± 1.66 | 112.0 ± 2.26 | 96.1 ± 2.31 | n = 98 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Urea Nitrogen (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 30.2 ± 1.58 | 61.9 ± 2.81 | 10.5 ± 0.80 | 21.5 ± 1.21 | 18.5 ± 1.05 | n = 374 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 28.7 ± 0.51 | 60.3 ± 2.26 | 10.7 ± 0.51 | 20.7 ± 0.51 | 17.7 ± 0.51 | n = 3 | [AXA] Abaxis Piccolo |
| 29.8 ± 0.59 | 60.9 ± 0.88 | 10.5 ± 0.57 | 21.3 ± 0.54 | 18.5 ± 0.57 | n = 13 | [ABJ] Abbott Architect c System |
| 30.4 ± 0.97 | 62.4 ± 2.12 | 10.8 ± 0.48 | 21.8 ± 0.74 | 18.8 ± 0.52 | n = 50 | [OLC] Beckman Coulter AU Chemistry System |
| 30.8 ± 0.61 | 63.7 ± 1.53 | 10.9 ± 0.92 | 21.9 ± 0.74 | 19.0 ± 0.84 | n = 10 | [BCS] Beckman Coulter CX |
| 29.5 ± 0.65 | 61.1 ± 1.29 | 10.1 ± 0.70 | 20.7 ± 0.62 | 18.0 ± 0.65 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 30.7 ± 0.61 | 61.7 ± 1.22 | 11.0 ± 0.00 | 21.7 ± 0.63 | 18.8 ± 0.46 | n = 18 | [BCG] Beckman Coulter UniCel DxC 600 |
| 29.0 ± 0.84 | 60.7 ± 0.97 | 9.9 ± 0.75 | 20.5 ± 1.09 | 17.7 ± 1.00 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 33.8 ± 1.04 | 69.4 ± 0.87 | 9.8 ± 0.41 | 23.9 ± 0.60 | 19.8 ± 0.41 | n = 8 | [IAA] i-STAT |
| 25.3 ± 0.53 | 55.5 ± 1.23 | 9.5 ± 0.57 | 18.4 ± 0.56 | 16.0 ± 0.00 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 25.1 ± 0.62 | 55.3 ± 1.30 | 9.2 ± 0.42 | 18.0 ± 0.65 | 15.9 ± 0.70 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 25.0 ± 0.90 | 55.4 ± 1.22 | 9.0 ± 0.00 | 18.0 ± 0.00 | 15.7 ± 0.51 | n = 6 | [JJG] Ortho Vitros 5600 |
| 30.1 ± 0.59 | 61.8 ± 1.13 | 10.4 ± 0.56 | 21.6 ± 0.56 | 18.4 ± 0.56 | n = 14 | [ROC] Roche cobas c501 |
| 30.6 ± 0.76 | 62.6 ± 1.56 | 11.0 ± 0.00 | 22.0 ± 0.00 | 18.7 ± 0.63 | n = 13 | [ROT] Roche Cobas INTEGRA |
| 30.5 ± 0.94 | 62.5 ± 1.31 | 10.9 ± 0.54 | 21.8 ± 0.61 | 18.8 ± 0.69 | n = 36 | [ROD] Roche MODULAR D/P |
| 30.8 ± 0.67 | 63.5 ± 0.77 | 11.0 ± 0.00 | 22.0 ± 0.00 | 19.0 ± 0.00 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 30.3 ± 0.51 | 63.0 ± 0.00 | 11.0 ± 0.00 | 22.0 ± 0.00 | 18.7 ± 0.51 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 30.4 ± 0.92 | 61.8 ± 1.41 | 10.3 ± 0.64 | 21.4 ± 0.81 | 18.4 ± 0.57 | n = 11 | [DUE] Siemens Dimension EXL |
| 30.5 ± 1.41 | 63.0 ± 2.49 | 10.7 ± 0.88 | 21.9 ± 0.95 | 18.8 ± 1.03 | n = 37 | [DUR] Siemens Dimension RxL |
| 30.2 ± 1.12 | 61.9 ± 1.99 | 10.3 ± 0.68 | 21.5 ± 0.79 | 18.5 ± 0.69 | n = 29 | [DUT] Siemens Dimension Vista |
| 30.8 ± 1.00 | 63.4 ± 1.99 | 10.8 ± 0.41 | 22.1 ± 0.80 | 18.9 ± 0.74 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 28.7 ± 0.51 | 60.3 ± 2.26 | 10.7 ± 0.51 | 20.7 ± 0.51 | 17.7 ± 0.51 | n = 3 | [AX1] Abaxis |
| 29.8 ± 0.59 | 60.9 ± 0.88 | 10.5 ± 0.57 | 21.3 ± 0.54 | 18.5 ± 0.57 | n = 13 | [AB1] Abbott |
| 29.8 ± 1.13 | 61.2 ± 1.36 | 10.4 ± 0.79 | 21.1 ± 1.01 | 18.3 ± 0.86 | n = 59 | [BC1] Beckman Coulter |
| 30.4 ± 0.98 | 62.4 ± 2.10 | 10.8 ± 0.48 | 21.7 ± 0.75 | 18.8 ± 0.53 | n = 49 | [OL1] Beckman Coulter AU Series |
| 30.8 ± 0.80 | 63.8 ± 1.07 | 11.0 ± 1.00 | 22.0 ± 1.00 | 19.5 ± 0.83 | n = 5 | [CR1] Carolina |
| 33.6 ± 0.96 | 69.3 ± 0.74 | 10.0 ± 0.00 | 23.8 ± 0.47 | 19.8 ± 0.47 | n = 7 | [IA1] i-STAT thermal cartridge |
| 31.4 ± 1.02 | 62.5 ± 1.86 | 11.0 ± 0.90 | 22.0 ± 0.00 | 19.3 ± 0.51 | n = 3 | [JA1] JAS Diagnostics |
| 25.2 ± 0.63 | 55.4 ± 1.31 | 9.3 ± 0.53 | 18.1 ± 0.62 | 16.0 ± 0.62 | n = 44 | [JJ1] Ortho Clinical Diagnostics |
| 30.2 ± 0.65 | 61.9 ± 1.13 | 10.5 ± 0.57 | 21.6 ± 0.55 | 18.5 ± 0.57 | n = 15 | [RO4] Roche cobas c311/c501/c502/c701 |
| 30.5 ± 0.97 | 62.6 ± 1.32 | 10.9 ± 0.57 | 21.9 ± 0.63 | 18.8 ± 0.71 | n = 37 | [RO2] Roche Hitachi and Modular D/P |
| 30.6 ± 0.76 | 62.6 ± 1.56 | 11.0 ± 0.00 | 22.0 ± 0.00 | 18.7 ± 0.63 | n = 13 | [RO1] Roche Integra and MIRA |
| 30.8 ± 0.59 | 63.6 ± 0.94 | 11.0 ± 0.00 | 22.0 ± 0.00 | 19.0 ± 0.00 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 30.4 ± 1.20 | 62.6 ± 2.23 | 10.6 ± 0.73 | 21.8 ± 0.89 | 18.7 ± 0.83 | n = 96 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Creatinine (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 2.69 ± 0.16 | 4.75 ± 0.22 | 1.05 ± 0.11 | 1.44 ± 0.12 | 1.22 ± 0.10 | n = 380 | [---] All Methods & Instruments |
| 2.69 ± 0.19 | 4.77 ± 0.26 | 1.04 ± 0.12 | 1.43 ± 0.13 | 1.21 ± 0.11 | n = 187 | [---] All IDMS Traceable Methods |
| 2.71 ± 0.13 | 4.75 ± 0.17 | 1.06 ± 0.10 | 1.45 ± 0.11 | 1.23 ± 0.09 | n = 188 | [---] All Non-IDMS Traceable Methods |
| 2.70 ± 0.11 | 4.74 ± 0.15 | 1.06 ± 0.09 | 1.45 ± 0.10 | 1.22 ± 0.08 | n = 169 | [-G-] Alkaline picrate/Jaffe |
| 2.63 ± 0.10 | 4.68 ± 0.16 | 1.03 ± 0.11 | 1.40 ± 0.09 | 1.18 ± 0.08 | n = 126 | [-H-] Alkaline picrate/Jaffe - IDMS calibration |
| 2.90 ± 0.28 | 5.22 ± 0.39 | 1.07 ± 0.16 | 1.55 ± 0.18 | 1.29 ± 0.15 | n = 19 | [-I-] Enzymatic |
| 2.88 ± 0.27 | 5.07 ± 0.33 | 1.07 ± 0.12 | 1.52 ± 0.17 | 1.28 ± 0.14 | n = 61 | [-J-] Enzymatic - IDMS-traceable calibration |
| 2.78 ± 0.24 | 5.01 ± 0.79 | 1.06 ± 0.04 | 1.44 ± 0.13 | 1.22 ± 0.12 | n = 3 | [-Z-] Other |
| | | | | | | <Instruments> |
| 2.63 ± 0.14 | 4.73 ± 0.13 | 0.95 ± 0.11 | 1.39 ± 0.08 | 1.16 ± 0.12 | n = 3 | [AXA] Abaxis Piccolo |
| 2.91 ± 0.10 | 5.07 ± 0.17 | 1.04 ± 0.05 | 1.59 ± 0.03 | 1.27 ± 0.05 | n = 13 | [ABJ] Abbott Architect c System |
| 2.61 ± 0.06 | 4.61 ± 0.09 | 1.05 ± 0.04 | 1.40 ± 0.02 | 1.18 ± 0.04 | n = 52 | [OLC] Beckman Coulter AU Chemistry System |
| 2.65 ± 0.08 | 4.71 ± 0.12 | 1.07 ± 0.13 | 1.43 ± 0.12 | 1.24 ± 0.10 | n = 10 | [BCS] Beckman Coulter CX |
| 2.61 ± 0.04 | 4.72 ± 0.07 | 0.91 ± 0.03 | 1.33 ± 0.03 | 1.14 ± 0.05 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 2.59 ± 0.08 | 4.61 ± 0.13 | 0.90 ± 0.00 | 1.33 ± 0.05 | 1.12 ± 0.07 | n = 19 | [BCG] Beckman Coulter UniCel DxC 600 |
| 2.61 ± 0.07 | 4.71 ± 0.09 | 0.94 ± 0.05 | 1.35 ± 0.05 | 1.14 ± 0.06 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 2.90 ± 0.20 | 5.97 ± 0.44 | 0.95 ± 0.07 | 1.50 ± 0.10 | 1.29 ± 0.14 | n = 7 | [IAA] i-STAT |
| 2.99 ± 0.07 | 5.19 ± 0.12 | 1.16 ± 0.05 | 1.63 ± 0.05 | 1.40 ± 0.00 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 3.09 ± 0.09 | 5.30 ± 0.10 | 1.13 ± 0.06 | 1.62 ± 0.06 | 1.36 ± 0.06 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 3.10 ± 0.00 | 5.28 ± 0.06 | 1.17 ± 0.05 | 1.67 ± 0.05 | 1.39 ± 0.06 | n = 6 | [JJG] Ortho Vitros 5600 |
| 2.64 ± 0.07 | 4.65 ± 0.12 | 1.03 ± 0.06 | 1.38 ± 0.08 | 1.17 ± 0.06 | n = 16 | [ROC] Roche cobas c501 |
| 2.58 ± 0.07 | 4.67 ± 0.12 | 0.97 ± 0.10 | 1.37 ± 0.07 | 1.15 ± 0.05 | n = 14 | [ROT] Roche Cobas INTEGRA |
| 2.73 ± 0.15 | 4.82 ± 0.15 | 1.10 ± 0.13 | 1.46 ± 0.14 | 1.25 ± 0.11 | n = 36 | [ROD] Roche MODULAR D/P |
| 2.71 ± 0.07 | 4.79 ± 0.10 | 1.18 ± 0.09 | 1.48 ± 0.05 | 1.20 ± 0.00 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 2.54 ± 0.07 | 4.54 ± 0.07 | 1.02 ± 0.03 | 1.29 ± 0.07 | 1.08 ± 0.05 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 2.73 ± 0.06 | 4.75 ± 0.13 | 1.07 ± 0.06 | 1.47 ± 0.05 | 1.21 ± 0.07 | n = 11 | [DUE] Siemens Dimension EXL |
| 2.74 ± 0.07 | 4.76 ± 0.10 | 1.10 ± 0.07 | 1.48 ± 0.07 | 1.26 ± 0.07 | n = 37 | [DUR] Siemens Dimension RxL |
| 2.70 ± 0.11 | 4.80 ± 0.17 | 1.03 ± 0.06 | 1.44 ± 0.11 | 1.24 ± 0.08 | n = 29 | [DUT] Siemens Dimension Vista |
| 2.71 ± 0.09 | 4.74 ± 0.09 | 1.04 ± 0.07 | 1.44 ± 0.08 | 1.20 ± 0.05 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 2.63 ± 0.14 | 4.73 ± 0.13 | 0.95 ± 0.11 | 1.39 ± 0.08 | 1.16 ± 0.12 | n = 3 | [AX1] Abaxis |
| 2.90 ± 0.10 | 5.08 ± 0.20 | 1.04 ± 0.06 | 1.58 ± 0.04 | 1.26 ± 0.05 | n = 14 | [AB1] Abbott |
| 2.60 ± 0.07 | 4.68 ± 0.11 | 0.92 ± 0.05 | 1.34 ± 0.06 | 1.14 ± 0.06 | n = 60 | [BC1] Beckman Coulter |
| 2.60 ± 0.06 | 4.61 ± 0.09 | 1.05 ± 0.04 | 1.39 ± 0.03 | 1.18 ± 0.04 | n = 49 | [OL1] Beckman Coulter AU Series |
| 2.70 ± 0.00 | 4.71 ± 0.12 | 1.12 ± 0.12 | 1.49 ± 0.12 | 1.29 ± 0.11 | n = 6 | [CR1] Carolina |
| 2.93 ± 0.21 | 6.03 ± 0.46 | 0.96 ± 0.07 | 1.51 ± 0.11 | 1.32 ± 0.14 | n = 6 | [IA1] i-STAT thermal cartridge |
| 2.43 ± 0.24 | 4.23 ± 0.36 | 1.05 ± 0.11 | 1.31 ± 0.15 | 1.12 ± 0.09 | n = 3 | [JA1] JAS Diagnostics |
| 3.06 ± 0.10 | 5.27 ± 0.12 | 1.15 ± 0.07 | 1.64 ± 0.06 | 1.37 ± 0.06 | n = 44 | [JJ1] Ortho Clinical Diagnostics |
| 2.63 ± 0.07 | 4.65 ± 0.12 | 1.04 ± 0.06 | 1.38 ± 0.08 | 1.17 ± 0.06 | n = 17 | [RO4] Roche cobas c311/c501/c502/c701 |
| 2.72 ± 0.15 | 4.81 ± 0.16 | 1.11 ± 0.13 | 1.46 ± 0.13 | 1.25 ± 0.11 | n = 37 | [RO2] Roche Hitachi and Modular D/P |
| 2.58 ± 0.07 | 4.67 ± 0.12 | 0.97 ± 0.10 | 1.37 ± 0.07 | 1.15 ± 0.05 | n = 14 | [RO1] Roche Integra and MIRA |
| 2.68 ± 0.10 | 4.75 ± 0.15 | 1.15 ± 0.10 | 1.45 ± 0.09 | 1.20 ± 0.05 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 2.72 ± 0.09 | 4.76 ± 0.12 | 1.06 ± 0.07 | 1.46 ± 0.09 | 1.23 ± 0.07 | n = 96 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Estimated Glomerular filtration rate (mL/min/1.73 m²)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 25.7 ± 2.43 | 13.3 ± 1.13 | 76.8 ± 10.20 | 53.0 ± 5.60 | 62.5 ± 8.14 | n = 277 | [---] All Methods & Instruments |
| 25.2 ± 2.66 | 13.0 ± 1.13 | 74.6 ± 11.91 | 51.9 ± 5.91 | 60.6 ± 8.42 | n = 154 | [-A-] IDMS-traceable MDRD Study Equation |
| 26.3 ± 1.89 | 13.6 ± 0.98 | 77.5 ± 8.23 | 53.9 ± 4.83 | 63.5 ± 6.77 | n = 107 | [-B-] Original MDRD Study Equation (4-variable) |
| 27.4 ± 1.79 | 13.6 ± 0.96 | 82.6 ± 2.47 | 57.9 ± 4.35 | 70.2 ± 6.19 | n = 12 | [-F-] CKD-EPI Equation |
| 23.3 ± 2.26 | 12.3 ± 0.51 | 81.5 ± 9.69 | 52.7 ± 5.86 | 65.0 ± 5.41 | n = 3 | [-Z-] Other |

**Target values and allowable ranges for Estimated Glomerular Filtration Rate (eGFR):**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Method |
|---|---|---|---|---|---|
| 25 (21-30) | 13 (11-16) | 76 (64-95) | 53 (44-61) | 64 (54-80) | IDMS-traceable MDRD Study Equation |
| 27 (22-31) | 14 (11-17) | 79 (67-99) | 55 (46-64) | 66 (56-83) | Original MDRD Study Equation |
| 33 (28-39) | 19 (16-22) | 85 (63-107) | 62 (52-78) | 73 (62-92) | Cockcroft-Gault Equation |
| 27 (22-31) | 13 (11-16) | 84 (63-106) | 57 (48-66) | 70 (59-88) | CKD-EPI Equation |

Laboratories were asked to report Estimated Glomerular Filtration Rate (eGFR) for samples C56-C60 for a 29-year-old African American woman weighing 68 kg.

Target values for eGFR calculated by the MDRD Study Equations were derived from participant mean values for serum creatinine for both conventional and isotope dilution mass spectroscopy (IDMS) calibration methods and application of the appropriate 4-variable MDRD Study equation.

Target values for eGFR calculated by the CKD-EPI equation were derived from participant mean values for IDMS-traceable serum creatinine methods and application of the CKD-EPI equation.

Target values for eGFR calculated by the Cockcroft-Gault equation were derived from all-method mean values for serum creatinine and application of the Cockcroft-Gault formula.

Allowable ranges are +/- 15% of the target eGFR for eGFR <= 59 mL/min; +/- 25% of the target eGFR for eGFR > 80 mL/min; and a range of -15% to +25% of the target eGFR for eGFR = 60-80 mL/min.

Note: the NKDEP recommends reporting estimated GFR values greater than or equal to 60 mL/min/1.73 $m^2$ as "> 60 mL/min/1.73 m2" and not as an exact number. However, ranges exceeding 60 mL/min are provided as a relative indicator of acceptability for laboratories that report numeric results above that threshold. Note that some laboratories reported results > 60 mL/min/1.73 m2 for samples C58, C59, and C60. These data were removed from the calculations of mean and standard deviation since their inclusion would have skewed results. Participant results for specimens C58, C59, and C60 reported as >60 mL/min/1.73 m2 were considered acceptable performance.

**Summary of Participant Performance (Mean and Standard Deviation)**

**Uric Acid (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 6.49 ± 0.30 | 3.11 ± 0.18 | 5.16 ± 0.24 | 8.11 ± 0.40 | 6.99 ± 0.36 | n = 336 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 6.83 ± 0.10 | 3.34 ± 0.11 | 5.48 ± 0.12 | 8.47 ± 0.10 | 7.30 ± 0.11 | n = 13 | [ABJ] Abbott Architect c System |
| 7.05 ± 0.16 | 3.51 ± 0.09 | 5.79 ± 0.13 | 8.97 ± 0.19 | 7.77 ± 0.17 | n = 47 | [OLC] Beckman Coulter AU Chemistry System |
| 6.34 ± 0.09 | 3.17 ± 0.10 | 5.08 ± 0.08 | 7.99 ± 0.08 | 7.03 ± 0.28 | n = 9 | [BCS] Beckman Coulter CX |
| 6.48 ± 0.08 | 3.20 ± 0.08 | 5.19 ± 0.08 | 8.03 ± 0.09 | 6.99 ± 0.07 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 6.36 ± 0.07 | 3.09 ± 0.04 | 5.03 ± 0.06 | 7.90 ± 0.09 | 6.82 ± 0.10 | n = 15 | [BCG] Beckman Coulter UniCel DxC 600 |
| 6.36 ± 0.08 | 3.10 ± 0.00 | 5.04 ± 0.06 | 7.91 ± 0.09 | 6.87 ± 0.06 | n = 21 | [BCH] Beckman Coulter UniCel DxC 800 |
| 6.43 ± 0.12 | 2.94 ± 0.08 | 5.07 ± 0.11 | 7.94 ± 0.17 | 6.84 ± 0.17 | n = 12 | [JJE] Ortho Vitros 250/350/950 |
| 6.42 ± 0.21 | 2.96 ± 0.11 | 5.06 ± 0.15 | 7.96 ± 0.26 | 6.82 ± 0.22 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 6.29 ± 0.17 | 2.90 ± 0.09 | 4.98 ± 0.14 | 7.79 ± 0.21 | 6.72 ± 0.18 | n = 6 | [JJG] Ortho Vitros 5600 |
| 6.62 ± 0.16 | 3.05 ± 0.06 | 5.22 ± 0.16 | 8.31 ± 0.16 | 7.10 ± 0.16 | n = 14 | [ROC] Roche cobas c501 |
| 6.47 ± 0.15 | 3.01 ± 0.04 | 5.12 ± 0.09 | 8.15 ± 0.14 | 7.01 ± 0.15 | n = 11 | [ROT] Roche Cobas INTEGRA |
| 6.52 ± 0.13 | 3.01 ± 0.05 | 5.13 ± 0.09 | 8.21 ± 0.16 | 7.06 ± 0.13 | n = 35 | [ROD] Roche MODULAR D/P |
| 6.59 ± 0.08 | 3.12 ± 0.05 | 5.19 ± 0.07 | 8.23 ± 0.09 | 7.09 ± 0.10 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 6.53 ± 0.14 | 3.07 ± 0.14 | 5.13 ± 0.14 | 8.08 ± 0.24 | 6.93 ± 0.23 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 6.45 ± 0.09 | 3.11 ± 0.08 | 5.14 ± 0.08 | 7.98 ± 0.11 | 6.87 ± 0.05 | n = 11 | [DUE] Siemens Dimension EXL |
| 6.44 ± 0.14 | 3.12 ± 0.11 | 5.16 ± 0.13 | 8.00 ± 0.18 | 6.91 ± 0.21 | n = 35 | [DUR] Siemens Dimension RxL |
| 5.99 ± 0.13 | 2.99 ± 0.07 | 4.94 ± 0.11 | 7.50 ± 0.16 | 6.50 ± 0.11 | n = 28 | [DUT] Siemens Dimension Vista |
| 6.38 ± 0.15 | 3.11 ± 0.08 | 5.13 ± 0.14 | 8.04 ± 0.23 | 6.90 ± 0.14 | n = 14 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 6.83 ± 0.10 | 3.34 ± 0.11 | 5.48 ± 0.12 | 8.47 ± 0.10 | 7.30 ± 0.11 | n = 13 | [AB1] Abbott |
| 6.39 ± 0.09 | 3.11 ± 0.07 | 5.06 ± 0.09 | 7.94 ± 0.10 | 6.89 ± 0.10 | n = 54 | [BC1] Beckman Coulter |
| 7.06 ± 0.15 | 3.52 ± 0.08 | 5.80 ± 0.12 | 8.97 ± 0.18 | 7.78 ± 0.16 | n = 46 | [OL1] Beckman Coulter AU Series |
| 6.30 ± 0.06 | 3.20 ± 0.10 | 5.08 ± 0.13 | 8.05 ± 0.23 | 7.21 ± 0.42 | n = 5 | [CR1] Carolina |
| 7.25 ± 0.45 | 3.63 ± 0.32 | 5.90 ± 0.45 | 9.12 ± 0.68 | 7.90 ± 0.54 | n = 3 | [JA1] JAS Diagnostics |
| 6.40 ± 0.19 | 2.94 ± 0.10 | 5.05 ± 0.14 | 7.92 ± 0.24 | 6.81 ± 0.21 | n = 40 | [JJ1] Ortho Clinical Diagnostics |
| 6.62 ± 0.16 | 3.05 ± 0.06 | 5.22 ± 0.16 | 8.31 ± 0.16 | 7.10 ± 0.16 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 6.51 ± 0.13 | 3.01 ± 0.05 | 5.13 ± 0.09 | 8.21 ± 0.16 | 7.05 ± 0.13 | n = 36 | [RO2] Roche Hitachi and Modular D/P |
| 6.47 ± 0.15 | 3.01 ± 0.04 | 5.12 ± 0.09 | 8.15 ± 0.14 | 7.01 ± 0.15 | n = 11 | [RO1] Roche Integra and MIRA |
| 6.61 ± 0.11 | 3.13 ± 0.06 | 5.21 ± 0.10 | 8.26 ± 0.14 | 7.11 ± 0.13 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 6.30 ± 0.26 | 3.07 ± 0.11 | 5.08 ± 0.17 | 7.86 ± 0.30 | 6.77 ± 0.26 | n = 88 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Bilirubin (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 1.38 ± 0.17 | 2.91 ± 0.19 | 0.73 ± 0.14 | 0.84 ± 0.17 | 0.69 ± 0.16 | n = 361 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 1.33 ± 0.05 | 2.80 ± 0.00 | 0.63 ± 0.05 | 0.70 ± 0.09 | 0.60 ± 0.09 | n = 3 | [AXA] Abaxis Piccolo |
| 1.52 ± 0.16 | 3.17 ± 0.21 | 0.78 ± 0.10 | 0.88 ± 0.19 | 0.70 ± 0.16 | n = 13 | [ABJ] Abbott Architect c System |
| 1.41 ± 0.07 | 2.86 ± 0.11 | 0.80 ± 0.04 | 0.93 ± 0.08 | 0.78 ± 0.05 | n = 50 | [OLC] Beckman Coulter AU Chemistry System |
| 1.56 ± 0.21 | 3.09 ± 0.26 | 0.94 ± 0.15 | 1.13 ± 0.15 | 0.94 ± 0.19 | n = 9 | [BCS] Beckman Coulter CX |
| 1.64 ± 0.16 | 3.10 ± 0.13 | 0.92 ± 0.10 | 1.00 ± 0.18 | 0.84 ± 0.18 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 1.63 ± 0.16 | 3.03 ± 0.15 | 0.87 ± 0.16 | 1.02 ± 0.19 | 0.87 ± 0.16 | n = 18 | [BCG] Beckman Coulter UniCel DxC 600 |
| 1.57 ± 0.11 | 3.02 ± 0.19 | 0.83 ± 0.10 | 0.96 ± 0.17 | 0.83 ± 0.15 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 1.29 ± 0.11 | 2.93 ± 0.17 | 0.80 ± 0.10 | 0.87 ± 0.13 | 0.70 ± 0.15 | n = 13 | [JJE] Ortho Vitros 250/350/950 |
| 1.19 ± 0.13 | 2.87 ± 0.17 | 0.71 ± 0.14 | 0.79 ± 0.17 | 0.60 ± 0.14 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 1.26 ± 0.16 | 3.00 ± 0.10 | 0.72 ± 0.09 | 0.88 ± 0.08 | 0.63 ± 0.14 | n = 6 | [JJG] Ortho Vitros 5600 |
| 1.20 ± 0.11 | 2.65 ± 0.16 | 0.52 ± 0.08 | 0.64 ± 0.16 | 0.48 ± 0.16 | n = 13 | [ROC] Roche cobas c501 |
| 1.19 ± 0.06 | 2.60 ± 0.00 | 0.50 ± 0.00 | 0.71 ± 0.08 | 0.56 ± 0.06 | n = 14 | [ROT] Roche Cobas INTEGRA |
| 1.23 ± 0.08 | 2.80 ± 0.11 | 0.58 ± 0.05 | 0.73 ± 0.07 | 0.57 ± 0.07 | n = 36 | [ROD] Roche MODULAR D/P |
| 1.44 ± 0.07 | 3.05 ± 0.10 | 0.74 ± 0.07 | 0.86 ± 0.10 | 0.73 ± 0.09 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 1.43 ± 0.05 | 3.10 ± 0.00 | 0.70 ± 0.00 | 0.83 ± 0.05 | 0.70 ± 0.00 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 1.36 ± 0.07 | 2.89 ± 0.04 | 0.72 ± 0.06 | 0.79 ± 0.07 | 0.64 ± 0.06 | n = 11 | [DUE] Siemens Dimension EXL |
| 1.37 ± 0.08 | 2.93 ± 0.10 | 0.69 ± 0.06 | 0.82 ± 0.09 | 0.66 ± 0.07 | n = 37 | [DUR] Siemens Dimension RxL |
| 1.40 ± 0.11 | 2.92 ± 0.17 | 0.72 ± 0.09 | 0.85 ± 0.08 | 0.70 ± 0.09 | n = 29 | [DUT] Siemens Dimension Vista |
| 1.38 ± 0.07 | 2.95 ± 0.08 | 0.73 ± 0.07 | 0.87 ± 0.08 | 0.69 ± 0.08 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 1.33 ± 0.05 | 2.80 ± 0.00 | 0.63 ± 0.05 | 0.70 ± 0.09 | 0.60 ± 0.09 | n = 3 | [AX1] Abaxis |
| 1.52 ± 0.16 | 3.17 ± 0.21 | 0.78 ± 0.10 | 0.88 ± 0.19 | 0.70 ± 0.16 | n = 13 | [AB1] Abbott |
| 1.61 ± 0.14 | 3.05 ± 0.17 | 0.88 ± 0.13 | 1.01 ± 0.18 | 0.86 ± 0.16 | n = 59 | [BC1] Beckman Coulter |
| 1.41 ± 0.08 | 2.86 ± 0.12 | 0.80 ± 0.05 | 0.93 ± 0.09 | 0.78 ± 0.05 | n = 48 | [OL1] Beckman Coulter AU Series |
| 1.40 ± 0.19 | 2.93 ± 0.27 | 0.83 ± 0.14 | 0.94 ± 0.25 | 0.80 ± 0.25 | n = 6 | [CR1] Carolina |
| 1.24 ± 0.15 | 2.91 ± 0.18 | 0.75 ± 0.14 | 0.83 ± 0.17 | 0.64 ± 0.17 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 1.20 ± 0.11 | 2.66 ± 0.15 | 0.52 ± 0.08 | 0.65 ± 0.15 | 0.49 ± 0.15 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 1.23 ± 0.08 | 2.80 ± 0.11 | 0.58 ± 0.05 | 0.73 ± 0.07 | 0.57 ± 0.07 | n = 36 | [RO2] Roche Hitachi and Modular D/P |
| 1.19 ± 0.06 | 2.60 ± 0.00 | 0.50 ± 0.00 | 0.71 ± 0.08 | 0.56 ± 0.06 | n = 14 | [RO1] Roche Integra and MIRA |
| 1.44 ± 0.07 | 3.05 ± 0.09 | 0.73 ± 0.06 | 0.85 ± 0.10 | 0.72 ± 0.08 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 1.38 ± 0.09 | 2.93 ± 0.11 | 0.71 ± 0.07 | 0.84 ± 0.09 | 0.67 ± 0.08 | n = 97 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Phosphorus (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 4.46 ± 0.20 | 3.90 ± 0.17 | 2.88 ± 0.13 | 6.04 ± 0.21 | 5.19 ± 0.18 | n = 338 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 4.47 ± 0.10 | 3.90 ± 0.09 | 2.92 ± 0.08 | 5.98 ± 0.12 | 5.17 ± 0.08 | n = 13 | [ABJ] Abbott Architect c System |
| 4.29 ± 0.11 | 3.77 ± 0.12 | 2.79 ± 0.09 | 5.83 ± 0.15 | 5.03 ± 0.14 | n = 48 | [OLC] Beckman Coulter AU Chemistry System |
| 4.70 ± 0.22 | 4.27 ± 0.47 | 3.15 ± 0.31 | 6.41 ± 0.45 | 5.34 ± 0.37 | n = 8 | [BCS] Beckman Coulter CX |
| 4.67 ± 0.05 | 4.08 ± 0.08 | 2.98 ± 0.08 | 6.26 ± 0.17 | 5.36 ± 0.12 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 4.46 ± 0.14 | 4.00 ± 0.14 | 2.91 ± 0.07 | 6.04 ± 0.18 | 5.21 ± 0.18 | n = 16 | [BCG] Beckman Coulter UniCel DxC 600 |
| 4.64 ± 0.10 | 4.02 ± 0.09 | 2.92 ± 0.09 | 6.16 ± 0.11 | 5.31 ± 0.07 | n = 22 | [BCH] Beckman Coulter UniCel DxC 800 |
| 4.82 ± 0.11 | 4.21 ± 0.11 | 3.15 ± 0.10 | 6.40 ± 0.13 | 5.51 ± 0.15 | n = 12 | [JJE] Ortho Vitros 250/350/950 |
| 4.78 ± 0.16 | 4.15 ± 0.14 | 3.08 ± 0.12 | 6.35 ± 0.18 | 5.40 ± 0.16 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 4.75 ± 0.12 | 4.15 ± 0.12 | 3.11 ± 0.12 | 6.35 ± 0.14 | 5.39 ± 0.13 | n = 6 | [JJG] Ortho Vitros 5600 |
| 4.47 ± 0.13 | 3.92 ± 0.08 | 2.91 ± 0.08 | 6.08 ± 0.13 | 5.24 ± 0.13 | n = 15 | [ROC] Roche cobas c501 |
| 4.38 ± 0.15 | 3.82 ± 0.07 | 2.90 ± 0.00 | 5.92 ± 0.11 | 5.09 ± 0.12 | n = 11 | [ROT] Roche Cobas INTEGRA |
| 4.44 ± 0.14 | 3.90 ± 0.14 | 2.88 ± 0.10 | 6.04 ± 0.16 | 5.20 ± 0.13 | n = 35 | [ROD] Roche MODULAR D/P |
| 4.47 ± 0.11 | 3.90 ± 0.06 | 2.89 ± 0.06 | 6.07 ± 0.09 | 5.19 ± 0.12 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 4.37 ± 0.05 | 3.83 ± 0.05 | 2.80 ± 0.00 | 5.97 ± 0.14 | 5.10 ± 0.09 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 4.41 ± 0.05 | 3.82 ± 0.05 | 2.82 ± 0.06 | 6.02 ± 0.06 | 5.17 ± 0.07 | n = 10 | [DUE] Siemens Dimension EXL |
| 4.44 ± 0.11 | 3.85 ± 0.08 | 2.84 ± 0.08 | 6.01 ± 0.11 | 5.18 ± 0.11 | n = 35 | [DUR] Siemens Dimension RxL |
| 4.27 ± 0.11 | 3.71 ± 0.11 | 2.73 ± 0.08 | 5.86 ± 0.16 | 5.01 ± 0.10 | n = 28 | [DUT] Siemens Dimension Vista |
| 4.38 ± 0.10 | 3.83 ± 0.06 | 2.84 ± 0.10 | 5.98 ± 0.12 | 5.17 ± 0.10 | n = 17 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 4.47 ± 0.10 | 3.90 ± 0.09 | 2.92 ± 0.08 | 5.98 ± 0.12 | 5.17 ± 0.08 | n = 13 | [AB1] Abbott |
| 4.59 ± 0.14 | 4.03 ± 0.11 | 2.93 ± 0.09 | 6.14 ± 0.16 | 5.29 ± 0.14 | n = 54 | [BC1] Beckman Coulter |
| 4.30 ± 0.11 | 3.77 ± 0.12 | 2.79 ± 0.09 | 5.84 ± 0.15 | 5.03 ± 0.13 | n = 47 | [OL1] Beckman Coulter AU Series |
| 4.79 ± 0.18 | 4.34 ± 0.20 | 3.22 ± 0.32 | 6.45 ± 0.32 | 5.56 ± 0.36 | n = 5 | [CR1] Carolina |
| 4.65 ± 0.36 | 3.89 ± 0.20 | 3.17 ± 0.34 | 6.15 ± 0.45 | 5.20 ± 0.45 | n = 3 | [JA1] JAS Diagnostics |
| 4.79 ± 0.14 | 4.17 ± 0.13 | 3.11 ± 0.12 | 6.36 ± 0.16 | 5.43 ± 0.16 | n = 40 | [JJ1] Ortho Clinical Diagnostics |
| 4.47 ± 0.13 | 3.92 ± 0.08 | 2.91 ± 0.08 | 6.08 ± 0.13 | 5.24 ± 0.13 | n = 15 | [RO4] Roche cobas c311/c501/c502/c701 |
| 4.44 ± 0.14 | 3.90 ± 0.14 | 2.88 ± 0.10 | 6.04 ± 0.16 | 5.20 ± 0.13 | n = 35 | [RO2] Roche Hitachi and Modular D/P |
| 4.38 ± 0.15 | 3.82 ± 0.07 | 2.90 ± 0.00 | 5.92 ± 0.11 | 5.09 ± 0.12 | n = 11 | [RO1] Roche Integra and MIRA |
| 4.45 ± 0.11 | 3.90 ± 0.07 | 2.88 ± 0.07 | 6.07 ± 0.10 | 5.19 ± 0.11 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 4.38 ± 0.13 | 3.81 ± 0.10 | 2.81 ± 0.10 | 5.97 ± 0.14 | 5.13 ± 0.13 | n = 90 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Calcium (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 10.66 ± 0.28 | 13.52 ± 0.33 | 9.62 ± 0.21 | 8.73 ± 0.20 | 7.55 ± 0.18 | n = 368 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 10.35 ± 0.27 | 13.43 ± 0.23 | 9.97 ± 0.05 | 8.92 ± 0.24 | 7.75 ± 0.27 | n = 3 | [AXA] Abaxis Piccolo |
| 10.88 ± 0.06 | 13.59 ± 0.17 | 9.67 ± 0.07 | 8.85 ± 0.09 | 7.67 ± 0.09 | n = 13 | [ABJ] Abbott Architect c System |
| 10.69 ± 0.19 | 13.42 ± 0.25 | 9.52 ± 0.14 | 8.72 ± 0.14 | 7.50 ± 0.14 | n = 51 | [OLC] Beckman Coulter AU Chemistry System |
| 10.53 ± 0.33 | 13.32 ± 0.36 | 9.53 ± 0.23 | 8.71 ± 0.27 | 7.65 ± 0.15 | n = 10 | [BCS] Beckman Coulter CX |
| 10.50 ± 0.23 | 13.42 ± 0.31 | 9.57 ± 0.22 | 8.69 ± 0.17 | 7.55 ± 0.18 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 10.35 ± 0.17 | 13.28 ± 0.17 | 9.48 ± 0.08 | 8.60 ± 0.12 | 7.49 ± 0.10 | n = 19 | [BCG] Beckman Coulter UniCel DxC 600 |
| 10.49 ± 0.10 | 13.41 ± 0.14 | 9.62 ± 0.12 | 8.70 ± 0.12 | 7.59 ± 0.12 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 10.62 ± 0.21 | 13.62 ± 0.19 | 9.73 ± 0.17 | 8.74 ± 0.19 | 7.47 ± 0.16 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 10.63 ± 0.18 | 13.53 ± 0.28 | 9.76 ± 0.22 | 8.74 ± 0.22 | 7.38 ± 0.19 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 10.56 ± 0.08 | 13.49 ± 0.13 | 9.69 ± 0.11 | 8.67 ± 0.07 | 7.35 ± 0.06 | n = 6 | [JJG] Ortho Vitros 5600 |
| 11.20 ± 0.27 | 14.40 ± 0.23 | 9.84 ± 0.23 | 9.00 ± 0.14 | 7.60 ± 0.17 | n = 15 | [ROC] Roche cobas c501 |
| 10.98 ± 0.27 | 14.15 ± 0.30 | 9.72 ± 0.18 | 8.80 ± 0.17 | 7.49 ± 0.16 | n = 13 | [ROT] Roche Cobas INTEGRA |
| 10.97 ± 0.31 | 13.81 ± 0.41 | 9.82 ± 0.28 | 8.92 ± 0.27 | 7.67 ± 0.21 | n = 36 | [ROD] Roche MODULAR D/P |
| 10.81 ± 0.21 | 13.41 ± 0.21 | 9.62 ± 0.15 | 8.85 ± 0.15 | 7.62 ± 0.20 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 10.79 ± 0.29 | 13.39 ± 0.37 | 9.52 ± 0.24 | 8.80 ± 0.55 | 7.61 ± 0.44 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 10.52 ± 0.15 | 13.38 ± 0.24 | 9.45 ± 0.19 | 8.56 ± 0.20 | 7.52 ± 0.18 | n = 11 | [DUE] Siemens Dimension EXL |
| 10.58 ± 0.20 | 13.48 ± 0.26 | 9.52 ± 0.18 | 8.65 ± 0.16 | 7.51 ± 0.17 | n = 37 | [DUR] Siemens Dimension RxL |
| 10.54 ± 0.20 | 13.51 ± 0.18 | 9.56 ± 0.16 | 8.66 ± 0.15 | 7.58 ± 0.16 | n = 29 | [DUT] Siemens Dimension Vista |
| 10.65 ± 0.23 | 13.61 ± 0.30 | 9.63 ± 0.17 | 8.72 ± 0.16 | 7.52 ± 0.17 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 10.35 ± 0.27 | 13.43 ± 0.23 | 9.97 ± 0.05 | 8.92 ± 0.24 | 7.75 ± 0.27 | n = 3 | [AX1] Abaxis |
| 10.88 ± 0.06 | 13.59 ± 0.17 | 9.67 ± 0.07 | 8.85 ± 0.09 | 7.67 ± 0.09 | n = 13 | [AB1] Abbott |
| 10.45 ± 0.19 | 13.36 ± 0.20 | 9.56 ± 0.15 | 8.66 ± 0.14 | 7.55 ± 0.13 | n = 60 | [BC1] Beckman Coulter |
| 10.69 ± 0.18 | 13.42 ± 0.25 | 9.52 ± 0.14 | 8.72 ± 0.14 | 7.51 ± 0.14 | n = 50 | [OL1] Beckman Coulter AU Series |
| 10.69 ± 0.28 | 13.54 ± 0.50 | 9.76 ± 0.41 | 8.97 ± 0.40 | 7.71 ± 0.11 | n = 5 | [CR1] Carolina |
| 10.30 ± 0.09 | 12.87 ± 0.69 | 9.64 ± 0.26 | 8.37 ± 0.23 | 7.48 ± 0.24 | n = 3 | [JA1] JAS Diagnostics |
| 10.61 ± 0.18 | 13.54 ± 0.25 | 9.73 ± 0.19 | 8.72 ± 0.19 | 7.40 ± 0.17 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 11.16 ± 0.24 | 14.36 ± 0.25 | 9.85 ± 0.19 | 8.98 ± 0.15 | 7.59 ± 0.15 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 10.98 ± 0.31 | 13.81 ± 0.41 | 9.81 ± 0.28 | 8.93 ± 0.27 | 7.68 ± 0.23 | n = 36 | [RO2] Roche Hitachi and Modular D/P |
| 10.98 ± 0.27 | 14.15 ± 0.30 | 9.72 ± 0.18 | 8.80 ± 0.17 | 7.49 ± 0.16 | n = 13 | [RO1] Roche Integra and MIRA |
| 10.84 ± 0.22 | 13.45 ± 0.23 | 9.64 ± 0.16 | 8.88 ± 0.20 | 7.64 ± 0.23 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 10.57 ± 0.21 | 13.50 ± 0.25 | 9.54 ± 0.19 | 8.66 ± 0.17 | 7.53 ± 0.17 | n = 97 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Magnesium (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 3.03 ± 0.12 | 1.65 ± 0.09 | 1.61 ± 0.09 | 2.44 ± 0.09 | 2.11 ± 0.09 | n = 330 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 2.96 ± 0.11 | 1.65 ± 0.08 | 1.59 ± 0.07 | 2.42 ± 0.15 | 2.06 ± 0.10 | n = 12 | [ABJ] Abbott Architect c System |
| 2.96 ± 0.09 | 1.60 ± 0.00 | 1.56 ± 0.06 | 2.40 ± 0.07 | 2.06 ± 0.07 | n = 46 | [OLC] Beckman Coulter AU Chemistry System |
| 3.22 ± 0.09 | 1.84 ± 0.18 | 1.77 ± 0.10 | 2.69 ± 0.15 | 2.33 ± 0.18 | n = 8 | [BCS] Beckman Coulter CX |
| 3.14 ± 0.11 | 1.69 ± 0.04 | 1.66 ± 0.08 | 2.50 ± 0.00 | 2.20 ± 0.00 | n = 11 | [BCX] Beckman Coulter LX-20 |
| 3.08 ± 0.08 | 1.67 ± 0.06 | 1.62 ± 0.07 | 2.50 ± 0.07 | 2.14 ± 0.06 | n = 18 | [BCG] Beckman Coulter UniCel DxC 600 |
| 3.09 ± 0.06 | 1.70 ± 0.00 | 1.64 ± 0.06 | 2.50 ± 0.04 | 2.14 ± 0.07 | n = 22 | [BCH] Beckman Coulter UniCel DxC 800 |
| 3.06 ± 0.11 | 1.72 ± 0.09 | 1.68 ± 0.09 | 2.46 ± 0.09 | 2.14 ± 0.09 | n = 7 | [JJE] Ortho Vitros 250/350/950 |
| 2.97 ± 0.07 | 1.70 ± 0.00 | 1.65 ± 0.07 | 2.40 ± 0.04 | 2.08 ± 0.08 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 2.90 ± 0.06 | 1.70 ± 0.00 | 1.61 ± 0.06 | 2.33 ± 0.05 | 2.00 ± 0.06 | n = 6 | [JJG] Ortho Vitros 5600 |
| 2.91 ± 0.07 | 1.66 ± 0.06 | 1.62 ± 0.05 | 2.39 ± 0.05 | 2.10 ± 0.00 | n = 13 | [ROC] Roche cobas c501 |
| 2.89 ± 0.11 | 1.63 ± 0.05 | 1.61 ± 0.07 | 2.38 ± 0.08 | 2.11 ± 0.08 | n = 11 | [ROT] Roche Cobas INTEGRA |
| 3.08 ± 0.05 | 1.70 ± 0.00 | 1.60 ± 0.00 | 2.48 ± 0.06 | 2.15 ± 0.08 | n = 33 | [ROD] Roche MODULAR D/P |
| 3.13 ± 0.06 | 1.89 ± 0.08 | 1.73 ± 0.05 | 2.55 ± 0.07 | 2.18 ± 0.07 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 3.23 ± 0.05 | 1.87 ± 0.05 | 1.70 ± 0.00 | 2.54 ± 0.10 | 2.14 ± 0.10 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 3.00 ± 0.07 | 1.54 ± 0.07 | 1.55 ± 0.07 | 2.42 ± 0.07 | 2.07 ± 0.05 | n = 9 | [DUE] Siemens Dimension EXL |
| 3.02 ± 0.09 | 1.57 ± 0.06 | 1.53 ± 0.07 | 2.42 ± 0.08 | 2.08 ± 0.07 | n = 37 | [DUR] Siemens Dimension RxL |
| 3.08 ± 0.10 | 1.61 ± 0.08 | 1.58 ± 0.07 | 2.46 ± 0.09 | 2.11 ± 0.09 | n = 29 | [DUT] Siemens Dimension Vista |
| 2.98 ± 0.10 | 1.59 ± 0.07 | 1.53 ± 0.11 | 2.42 ± 0.09 | 2.10 ± 0.07 | n = 18 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 2.96 ± 0.11 | 1.65 ± 0.08 | 1.59 ± 0.07 | 2.42 ± 0.15 | 2.06 ± 0.10 | n = 12 | [AB1] Abbott |
| 3.10 ± 0.08 | 1.68 ± 0.05 | 1.64 ± 0.06 | 2.50 ± 0.06 | 2.16 ± 0.06 | n = 56 | [BC1] Beckman Coulter |
| 2.96 ± 0.09 | 1.60 ± 0.00 | 1.56 ± 0.06 | 2.40 ± 0.07 | 2.06 ± 0.07 | n = 45 | [OL1] Beckman Coulter AU Series |
| 3.38 ± 0.20 | 2.00 ± 0.08 | 1.88 ± 0.13 | 2.81 ± 0.11 | 2.48 ± 0.13 | n = 4 | [CR1] Carolina |
| 2.97 ± 0.09 | 1.70 ± 0.00 | 1.65 ± 0.08 | 2.40 ± 0.07 | 2.08 ± 0.09 | n = 35 | [JJ1] Ortho Clinical Diagnostics |
| 2.91 ± 0.07 | 1.66 ± 0.06 | 1.62 ± 0.05 | 2.39 ± 0.05 | 2.10 ± 0.00 | n = 13 | [RO4] Roche cobas c311/c501/c502/c701 |
| 3.09 ± 0.05 | 1.69 ± 0.04 | 1.61 ± 0.04 | 2.47 ± 0.07 | 2.15 ± 0.08 | n = 33 | [RO2] Roche Hitachi and Modular D/P |
| 2.92 ± 0.10 | 1.64 ± 0.06 | 1.62 ± 0.06 | 2.40 ± 0.09 | 2.11 ± 0.08 | n = 11 | [RO1] Roche Integra and MIRA |
| 3.15 ± 0.08 | 1.87 ± 0.09 | 1.72 ± 0.06 | 2.54 ± 0.09 | 2.18 ± 0.07 | n = 24 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 3.02 ± 0.10 | 1.58 ± 0.07 | 1.55 ± 0.08 | 2.43 ± 0.09 | 2.09 ± 0.08 | n = 92 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Iron (µg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 134.5 ± 7.10 | 106.9 ± 10.59 | 97.9 ± 7.61 | 116.7 ± 10.42 | 100.1 ± 8.65 | n = 267 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 108.9 ± 2.67 | 60.1 ± 2.45 | 63.3 ± 1.60 | 69.9 ± 2.83 | 61.0 ± 1.86 | n = 12 | [ABJ] Abbott Architect c System |
| 138.7 ± 4.12 | 109.2 ± 2.92 | 99.4 ± 2.70 | 119.2 ± 2.92 | 102.1 ± 2.60 | n = 45 | [OLC] Beckman Coulter AU Chemistry System |
| 123.9 ± 1.84 | 92.0 ± 5.43 | 84.3 ± 9.58 | 105.6 ± 5.92 | 88.9 ± 8.36 | n = 6 | [BCS] Beckman Coulter CX |
| 130.1 ± 2.98 | 92.4 ± 3.50 | 86.7 ± 1.83 | 98.9 ± 1.81 | 86.9 ± 2.79 | n = 10 | [BCX] Beckman Coulter LX-20 |
| 128.3 ± 3.12 | 92.8 ± 4.91 | 86.6 ± 2.90 | 100.8 ± 3.85 | 87.2 ± 4.19 | n = 9 | [BCG] Beckman Coulter UniCel DxC 600 |
| 127.8 ± 2.94 | 90.8 ± 2.39 | 86.3 ± 2.08 | 99.0 ± 3.18 | 86.5 ± 2.45 | n = 16 | [BCH] Beckman Coulter UniCel DxC 800 |
| 143.7 ± 3.96 | 119.0 ± 6.24 | 103.7 ± 5.70 | 129.1 ± 6.33 | 109.4 ± 5.70 | n = 6 | [JJE] Ortho Vitros 250/350/950 |
| 151.8 ± 5.80 | 126.7 ± 4.20 | 110.7 ± 5.64 | 137.8 ± 5.45 | 116.1 ± 5.19 | n = 20 | [JJF] Ortho Vitros 5,1FS |
| 152.1 ± 4.45 | 125.0 ± 1.66 | 112.2 ± 2.57 | 136.4 ± 1.73 | 117.7 ± 3.69 | n = 6 | [JJG] Ortho Vitros 5600 |
| 137.0 ± 2.55 | 113.9 ± 2.07 | 104.3 ± 2.30 | 122.7 ± 2.82 | 106.5 ± 2.08 | n = 10 | [ROC] Roche cobas c501 |
| 137.5 ± 3.12 | 112.5 ± 0.58 | 102.5 ± 2.64 | 120.5 ± 2.63 | 105.0 ± 3.12 | n = 8 | [ROT] Roche Cobas INTEGRA |
| 134.9 ± 2.46 | 110.9 ± 2.11 | 100.2 ± 2.43 | 119.2 ± 2.30 | 102.7 ± 1.91 | n = 32 | [ROD] Roche MODULAR D/P |
| 135.5 ± 1.42 | 112.3 ± 1.52 | 101.5 ± 1.71 | 121.2 ± 1.93 | 104.1 ± 1.61 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 134.3 ± 0.51 | 109.4 ± 1.02 | 99.6 ± 1.02 | 119.3 ± 0.51 | 101.6 ± 1.02 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 129.8 ± 1.07 | 100.2 ± 1.07 | 93.6 ± 1.09 | 112.1 ± 1.27 | 95.0 ± 1.00 | n = 5 | [DUE] Siemens Dimension EXL |
| 130.0 ± 1.91 | 100.0 ± 2.34 | 93.4 ± 1.62 | 111.4 ± 1.90 | 95.2 ± 1.65 | n = 24 | [DUR] Siemens Dimension RxL |
| 132.5 ± 2.27 | 101.8 ± 2.01 | 94.5 ± 1.57 | 113.2 ± 2.16 | 97.0 ± 1.64 | n = 25 | [DUT] Siemens Dimension Vista |
| 131.3 ± 2.54 | 103.0 ± 3.36 | 95.6 ± 3.79 | 113.6 ± 2.31 | 97.1 ± 2.33 | n = 4 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 108.9 ± 2.66 | 60.1 ± 2.43 | 63.3 ± 1.58 | 69.8 ± 2.82 | 61.0 ± 1.84 | n = 10 | [AB2] Abbott-Iron/7D68 |
| 128.3 ± 3.25 | 91.2 ± 3.33 | 86.3 ± 2.48 | 99.6 ± 3.45 | 86.6 ± 3.08 | n = 37 | [BC1] Beckman Coulter |
| 139.7 ± 3.42 | 109.2 ± 2.94 | 99.6 ± 2.64 | 119.5 ± 2.87 | 102.3 ± 2.77 | n = 36 | [OL1] Beckman Coulter AU Series |
| 113.3 ± 27.86 | 95.2 ± 3.59 | 85.7 ± 12.30 | 108.3 ± 3.62 | 92.5 ± 7.87 | n = 4 | [CR1] Carolina |
| 137.7 ± 5.91 | 112.1 ± 3.72 | 101.0 ± 4.60 | 119.8 ± 5.12 | 102.9 ± 5.22 | n = 3 | [DG1] Diagnostic Chemicals Ltd - Endpoint |
| 135.0 ± 3.50 | 109.3 ± 3.28 | 99.1 ± 3.13 | 118.2 ± 2.94 | 102.1 ± 1.98 | n = 7 | [GZ1] Genzyme |
| 150.4 ± 6.24 | 125.6 ± 5.24 | 110.0 ± 6.10 | 136.5 ± 6.19 | 115.5 ± 5.92 | n = 32 | [JJ1] Ortho Clinical Diagnostics |
| 137.0 ± 2.55 | 113.9 ± 2.07 | 104.3 ± 2.30 | 122.7 ± 2.82 | 106.5 ± 2.08 | n = 10 | [RO4] Roche cobas c311/c501/c502/c701 |
| 134.7 ± 2.39 | 110.8 ± 2.06 | 100.0 ± 2.40 | 119.1 ± 2.20 | 102.6 ± 1.81 | n = 32 | [RO2] Roche Hitachi and Modular D/P |
| 137.5 ± 3.12 | 112.5 ± 0.58 | 102.5 ± 2.64 | 120.5 ± 2.63 | 105.0 ± 3.12 | n = 8 | [RO1] Roche Integra and MIRA |
| 135.3 ± 1.55 | 111.8 ± 1.63 | 101.1 ± 1.61 | 120.7 ± 1.76 | 103.9 ± 1.78 | n = 22 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 131.1 ± 2.46 | 101.1 ± 2.47 | 94.1 ± 1.85 | 112.4 ± 2.11 | 96.1 ± 2.06 | n = 56 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Sodium (mmol/L)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 148.5 ± 2.49 | 130.2 ± 1.95 | 138.5 ± 1.90 | 155.5 ± 2.46 | 134.2 ± 1.76 | n = 376 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 147.3 ± 0.51 | 125.3 ± 1.37 | 133.0 ± 0.90 | 155.0 ± 0.90 | 131.7 ± 1.37 | n = 3 | [AXA] Abaxis Piccolo |
| 149.5 ± 0.65 | 129.3 ± 0.74 | 138.6 ± 0.62 | 155.8 ± 0.67 | 133.9 ± 0.88 | n = 13 | [ABJ] Abbott Architect c System |
| 147.8 ± 1.24 | 129.1 ± 1.19 | 138.2 ± 1.45 | 154.6 ± 1.64 | 133.4 ± 1.35 | n = 51 | [OLC] Beckman Coulter AU Chemistry System |
| 149.0 ± 1.78 | 129.4 ± 1.24 | 137.6 ± 1.21 | 155.4 ± 1.07 | 133.8 ± 1.19 | n = 10 | [BCS] Beckman Coulter CX |
| 147.5 ± 1.31 | 129.4 ± 1.09 | 138.1 ± 1.05 | 154.8 ± 1.30 | 133.8 ± 1.18 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 147.3 ± 1.37 | 129.7 ± 1.52 | 137.8 ± 1.37 | 154.6 ± 1.46 | 133.9 ± 1.06 | n = 19 | [BCG] Beckman Coulter UniCel DxC 600 |
| 148.2 ± 1.09 | 130.0 ± 0.71 | 138.5 ± 1.01 | 155.3 ± 1.02 | 134.7 ± 0.91 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 146.4 ± 0.99 | 130.0 ± 0.00 | 135.3 ± 0.74 | 153.5 ± 1.02 | 132.4 ± 0.56 | n = 9 | [IAA] i-STAT |
| 155.9 ± 2.12 | 134.5 ± 1.63 | 142.5 ± 1.90 | 163.3 ± 1.40 | 139.3 ± 1.66 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 155.7 ± 2.16 | 134.0 ± 1.65 | 141.7 ± 2.47 | 162.1 ± 2.43 | 137.8 ± 2.06 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 156.3 ± 1.83 | 134.5 ± 1.24 | 142.5 ± 1.24 | 163.5 ± 1.46 | 138.7 ± 0.97 | n = 6 | [JJG] Ortho Vitros 5600 |
| 148.2 ± 1.47 | 128.6 ± 1.32 | 137.7 ± 1.37 | 155.3 ± 1.46 | 133.3 ± 1.36 | n = 14 | [ROC] Roche cobas c501 |
| 148.3 ± 0.72 | 128.5 ± 0.66 | 136.8 ± 0.49 | 154.8 ± 1.18 | 133.3 ± 0.88 | n = 12 | [ROT] Roche Cobas INTEGRA |
| 150.0 ± 1.67 | 130.1 ± 1.36 | 138.9 ± 1.47 | 156.5 ± 1.88 | 134.1 ± 1.38 | n = 35 | [ROD] Roche MODULAR D/P |
| 150.4 ± 1.03 | 131.2 ± 0.73 | 140.0 ± 0.82 | 156.7 ± 1.14 | 135.2 ± 0.83 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 149.5 ± 1.86 | 131.0 ± 1.80 | 139.0 ± 0.90 | 157.3 ± 2.26 | 135.3 ± 1.37 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 147.7 ± 1.82 | 129.9 ± 1.50 | 138.4 ± 1.51 | 154.7 ± 1.88 | 134.2 ± 1.27 | n = 11 | [DUE] Siemens Dimension EXL |
| 146.7 ± 1.68 | 130.0 ± 1.53 | 137.9 ± 1.63 | 153.7 ± 2.07 | 133.8 ± 1.72 | n = 37 | [DUR] Siemens Dimension RxL |
| 147.0 ± 1.36 | 131.6 ± 1.47 | 138.3 ± 1.50 | 154.5 ± 2.05 | 134.5 ± 1.57 | n = 29 | [DUT] Siemens Dimension Vista |
| 148.7 ± 1.46 | 130.7 ± 1.48 | 139.5 ± 1.35 | 155.8 ± 1.83 | 134.2 ± 1.20 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 147.3 ± 0.51 | 125.3 ± 1.37 | 133.0 ± 0.90 | 155.0 ± 0.90 | 131.7 ± 1.37 | n = 3 | [AX1] Abaxis |
| 149.5 ± 0.65 | 129.3 ± 0.74 | 138.6 ± 0.62 | 155.8 ± 0.67 | 133.9 ± 0.88 | n = 13 | [AB1] Abbott |
| 147.8 ± 1.30 | 129.7 ± 1.16 | 138.2 ± 1.18 | 155.0 ± 1.20 | 134.2 ± 1.09 | n = 60 | [BC1] Beckman Coulter |
| 147.8 ± 1.29 | 129.0 ± 1.19 | 138.2 ± 1.47 | 154.6 ± 1.66 | 133.5 ± 1.34 | n = 50 | [OL1] Beckman Coulter AU Series |
| 149.1 ± 2.14 | 129.6 ± 1.09 | 137.1 ± 1.38 | 156.0 ± 1.54 | 133.6 ± 1.33 | n = 5 | [CR1] Carolina |
| 146.5 ± 0.90 | 130.0 ± 0.00 | 135.4 ± 0.57 | 153.6 ± 1.07 | 132.5 ± 0.57 | n = 8 | [IA1] i-STAT thermal cartridge |
| 149.0 ± 0.00 | 132.1 ± 2.86 | 140.3 ± 1.37 | 159.3 ± 3.37 | 137.2 ± 4.89 | n = 3 | [IL1] Instrumentation Lab |
| 155.8 ± 2.18 | 134.3 ± 1.67 | 142.1 ± 2.10 | 162.7 ± 2.08 | 138.5 ± 2.00 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 148.1 ± 1.41 | 128.5 ± 1.28 | 137.7 ± 1.32 | 155.3 ± 1.38 | 133.3 ± 1.28 | n = 15 | [RO4] Roche cobas c311/c501/c502/c701 |
| 150.0 ± 1.67 | 130.1 ± 1.36 | 138.9 ± 1.47 | 156.5 ± 1.88 | 134.1 ± 1.38 | n = 35 | [RO2] Roche Hitachi and Modular D/P |
| 148.3 ± 0.72 | 128.5 ± 0.66 | 136.8 ± 0.49 | 154.8 ± 1.18 | 133.3 ± 0.88 | n = 12 | [RO1] Roche Integra and MIRA |
| 150.2 ± 1.26 | 131.1 ± 0.89 | 139.8 ± 0.93 | 156.8 ± 1.43 | 135.2 ± 0.95 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 147.3 ± 1.77 | 130.6 ± 1.65 | 138.4 ± 1.64 | 154.5 ± 2.15 | 134.1 ± 1.54 | n = 97 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Potassium (mmol/L)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 4.44 ± 0.09 | 3.20 ± 0.10 | 3.07 ± 0.09 | 6.02 ± 0.12 | 5.15 ± 0.10 | n = 376 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 4.60 ± 0.00 | 3.20 ± 0.09 | 3.20 ± 0.09 | 6.10 ± 0.09 | 5.13 ± 0.05 | n = 3 | [AXA] Abaxis Piccolo |
| 4.50 ± 0.00 | 3.20 ± 0.00 | 3.10 ± 0.00 | 6.00 ± 0.00 | 5.15 ± 0.06 | n = 13 | [ABJ] Abbott Architect c System |
| 4.41 ± 0.05 | 3.20 ± 0.00 | 3.12 ± 0.05 | 5.96 ± 0.08 | 5.10 ± 0.00 | n = 51 | [OLC] Beckman Coulter AU Chemistry System |
| 4.41 ± 0.06 | 3.15 ± 0.07 | 3.02 ± 0.06 | 6.02 ± 0.06 | 5.16 ± 0.07 | n = 10 | [BCS] Beckman Coulter CX |
| 4.40 ± 0.06 | 3.10 ± 0.00 | 3.00 ± 0.00 | 6.01 ± 0.05 | 5.10 ± 0.00 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 4.40 ± 0.05 | 3.13 ± 0.07 | 3.01 ± 0.06 | 6.03 ± 0.07 | 5.11 ± 0.07 | n = 19 | [BCG] Beckman Coulter UniCel DxC 600 |
| 4.40 ± 0.00 | 3.12 ± 0.05 | 3.00 ± 0.00 | 6.05 ± 0.06 | 5.15 ± 0.06 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 4.40 ± 0.00 | 3.20 ± 0.00 | 3.00 ± 0.00 | 5.90 ± 0.00 | 5.11 ± 0.05 | n = 9 | [IAA] i-STAT |
| 4.69 ± 0.06 | 3.38 ± 0.06 | 3.20 ± 0.00 | 6.27 ± 0.07 | 5.41 ± 0.07 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 4.70 ± 0.07 | 3.39 ± 0.05 | 3.20 ± 0.00 | 6.29 ± 0.11 | 5.40 ± 0.08 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 4.72 ± 0.07 | 3.40 ± 0.00 | 3.20 ± 0.00 | 6.29 ± 0.06 | 5.38 ± 0.07 | n = 6 | [JJG] Ortho Vitros 5600 |
| 4.34 ± 0.08 | 3.08 ± 0.04 | 2.95 ± 0.06 | 5.91 ± 0.09 | 5.03 ± 0.07 | n = 13 | [ROC] Roche cobas c501 |
| 4.46 ± 0.06 | 3.20 ± 0.00 | 3.10 ± 0.00 | 6.04 ± 0.07 | 5.20 ± 0.00 | n = 12 | [ROT] Roche Cobas INTEGRA |
| 4.40 ± 0.05 | 3.17 ± 0.08 | 3.02 ± 0.08 | 5.95 ± 0.08 | 5.10 ± 0.07 | n = 35 | [ROD] Roche MODULAR D/P |
| 4.52 ± 0.06 | 3.26 ± 0.06 | 3.18 ± 0.04 | 6.09 ± 0.05 | 5.20 ± 0.00 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 4.50 ± 0.00 | 3.23 ± 0.05 | 3.10 ± 0.00 | 6.07 ± 0.05 | 5.20 ± 0.00 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 4.40 ± 0.00 | 3.13 ± 0.05 | 3.00 ± 0.00 | 6.00 ± 0.06 | 5.15 ± 0.07 | n = 11 | [DUE] Siemens Dimension EXL |
| 4.40 ± 0.00 | 3.15 ± 0.06 | 3.02 ± 0.05 | 5.96 ± 0.07 | 5.12 ± 0.07 | n = 37 | [DUR] Siemens Dimension RxL |
| 4.50 ± 0.00 | 3.30 ± 0.00 | 3.11 ± 0.04 | 6.09 ± 0.08 | 5.23 ± 0.06 | n = 29 | [DUT] Siemens Dimension Vista |
| 4.40 ± 0.00 | 3.15 ± 0.06 | 3.02 ± 0.04 | 6.06 ± 0.06 | 5.16 ± 0.06 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 4.60 ± 0.00 | 3.20 ± 0.09 | 3.20 ± 0.09 | 6.10 ± 0.09 | 5.13 ± 0.05 | n = 3 | [AX1] Abaxis |
| 4.50 ± 0.00 | 3.20 ± 0.00 | 3.10 ± 0.00 | 6.00 ± 0.00 | 5.15 ± 0.06 | n = 13 | [AB1] Abbott |
| 4.41 ± 0.05 | 3.12 ± 0.05 | 3.00 ± 0.00 | 6.03 ± 0.06 | 5.13 ± 0.06 | n = 60 | [BC1] Beckman Coulter |
| 4.41 ± 0.05 | 3.20 ± 0.00 | 3.12 ± 0.06 | 5.96 ± 0.08 | 5.10 ± 0.00 | n = 50 | [OL1] Beckman Coulter AU Series |
| 4.45 ± 0.11 | 3.20 ± 0.00 | 3.06 ± 0.06 | 6.06 ± 0.06 | 5.20 ± 0.00 | n = 5 | [CR1] Carolina |
| 4.40 ± 0.00 | 3.20 ± 0.00 | 3.00 ± 0.00 | 5.90 ± 0.00 | 5.12 ± 0.04 | n = 8 | [IA1] i-STAT thermal cartridge |
| 4.48 ± 0.15 | 3.24 ± 0.10 | 2.97 ± 0.05 | 6.14 ± 0.26 | 5.18 ± 0.15 | n = 3 | [IL1] Instrumentation Lab |
| 4.70 ± 0.07 | 3.39 ± 0.05 | 3.20 ± 0.00 | 6.28 ± 0.10 | 5.40 ± 0.08 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 4.35 ± 0.08 | 3.10 ± 0.00 | 2.96 ± 0.06 | 5.92 ± 0.09 | 5.04 ± 0.07 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 4.40 ± 0.05 | 3.17 ± 0.08 | 3.02 ± 0.08 | 5.95 ± 0.08 | 5.10 ± 0.07 | n = 35 | [RO2] Roche Hitachi and Modular D/P |
| 4.45 ± 0.06 | 3.20 ± 0.00 | 3.10 ± 0.00 | 6.03 ± 0.06 | 5.20 ± 0.00 | n = 13 | [RO1] Roche Integra and MIRA |
| 4.52 ± 0.06 | 3.25 ± 0.06 | 3.15 ± 0.06 | 6.09 ± 0.06 | 5.20 ± 0.00 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 4.42 ± 0.06 | 3.19 ± 0.08 | 3.05 ± 0.07 | 6.02 ± 0.09 | 5.16 ± 0.08 | n = 97 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Chloride (mmol/L)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 108.5 ± 2.82 | 102.9 ± 3.29 | 98.3 ± 2.26 | 118.9 ± 2.76 | 101.7 ± 2.89 | n = 371 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 111.4 ± 1.02 | 105.3 ± 0.51 | 100.6 ± 1.02 | 120.0 ± 0.90 | 104.7 ± 0.51 | n = 3 | [AXA] Abaxis Piccolo |
| 109.9 ± 1.07 | 104.9 ± 0.66 | 98.9 ± 0.75 | 120.2 ± 0.79 | 103.6 ± 0.56 | n = 12 | [ABJ] Abbott Architect c System |
| 106.9 ± 1.30 | 102.5 ± 0.93 | 97.1 ± 0.84 | 117.5 ± 1.27 | 101.0 ± 0.86 | n = 50 | [OLC] Beckman Coulter AU Chemistry System |
| 112.7 ± 2.70 | 108.5 ± 1.80 | 102.7 ± 1.83 | 122.9 ± 2.38 | 106.9 ± 1.45 | n = 10 | [BCS] Beckman Coulter CX |
| 110.1 ± 1.62 | 105.9 ± 1.21 | 100.0 ± 1.30 | 121.5 ± 1.23 | 103.8 ± 1.72 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 109.9 ± 1.64 | 105.2 ± 1.41 | 99.4 ± 1.47 | 120.6 ± 1.58 | 103.6 ± 1.27 | n = 19 | [BCG] Beckman Coulter UniCel DxC 600 |
| 110.3 ± 1.13 | 105.7 ± 0.88 | 99.9 ± 1.29 | 121.2 ± 1.02 | 104.3 ± 1.06 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 120.0 ± 0.75 | 112.2 ± 1.36 | 102.7 ± 0.69 | 127.3 ± 1.24 | 108.6 ± 0.68 | n = 8 | [IAA] i-STAT |
| 111.6 ± 1.10 | 106.0 ± 0.63 | 100.5 ± 0.77 | 122.4 ± 1.03 | 105.1 ± 0.92 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 111.6 ± 1.79 | 106.0 ± 1.86 | 100.1 ± 1.63 | 121.9 ± 1.98 | 104.3 ± 1.74 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 112.8 ± 1.76 | 106.7 ± 1.21 | 101.0 ± 1.56 | 123.2 ± 1.45 | 105.8 ± 1.45 | n = 6 | [JJG] Ortho Vitros 5600 |
| 103.5 ± 1.57 | 98.3 ± 1.10 | 93.9 ± 0.85 | 115.2 ± 0.82 | 96.6 ± 1.56 | n = 14 | [ROC] Roche cobas c501 |
| 109.0 ± 0.90 | 102.3 ± 0.89 | 98.5 ± 0.78 | 118.4 ± 0.89 | 101.1 ± 0.75 | n = 12 | [ROT] Roche Cobas INTEGRA |
| 106.2 ± 1.19 | 101.2 ± 1.10 | 95.8 ± 0.91 | 116.8 ± 0.95 | 99.0 ± 1.01 | n = 35 | [ROD] Roche MODULAR D/P |
| 108.6 ± 1.28 | 103.6 ± 0.97 | 97.9 ± 0.81 | 118.7 ± 0.87 | 101.3 ± 0.80 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 108.5 ± 1.86 | 103.5 ± 1.86 | 97.5 ± 1.86 | 118.5 ± 1.86 | 101.0 ± 1.80 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 106.7 ± 0.99 | 98.4 ± 0.91 | 98.1 ± 1.26 | 116.9 ± 1.11 | 99.6 ± 0.92 | n = 11 | [DUE] Siemens Dimension EXL |
| 106.8 ± 1.65 | 98.9 ± 1.52 | 97.7 ± 1.93 | 117.7 ± 1.65 | 99.2 ± 1.68 | n = 37 | [DUR] Siemens Dimension RxL |
| 109.8 ± 1.25 | 103.4 ± 1.37 | 98.4 ± 1.37 | 119.6 ± 1.71 | 102.3 ± 1.10 | n = 29 | [DUT] Siemens Dimension Vista |
| 106.7 ± 1.47 | 98.8 ± 1.24 | 98.0 ± 1.19 | 117.0 ± 1.50 | 99.5 ± 1.10 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 111.4 ± 1.02 | 105.3 ± 0.51 | 100.6 ± 1.02 | 120.0 ± 0.90 | 104.7 ± 0.51 | n = 3 | [AX1] Abaxis |
| 109.9 ± 1.02 | 104.9 ± 0.62 | 98.8 ± 0.79 | 120.2 ± 0.74 | 103.5 ± 0.57 | n = 13 | [AB1] Abbott |
| 110.3 ± 1.64 | 105.7 ± 1.28 | 99.9 ± 1.47 | 121.2 ± 1.43 | 104.1 ± 1.45 | n = 60 | [BC1] Beckman Coulter |
| 106.8 ± 1.30 | 102.4 ± 0.89 | 97.1 ± 0.85 | 117.4 ± 1.25 | 101.1 ± 0.88 | n = 49 | [OL1] Beckman Coulter AU Series |
| 112.9 ± 3.11 | 109.5 ± 1.23 | 104.5 ± 0.57 | 123.9 ± 2.41 | 107.7 ± 0.82 | n = 5 | [CR1] Carolina |
| 119.8 ± 0.66 | 113.0 ± 0.00 | 102.7 ± 0.74 | 127.4 ± 1.34 | 109.0 ± 0.00 | n = 7 | [IA1] i-STAT thermal cartridge |
| 111.8 ± 1.60 | 106.0 ± 1.44 | 100.3 ± 1.36 | 122.2 ± 1.60 | 104.7 ± 1.54 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 103.5 ± 1.51 | 98.4 ± 1.08 | 93.9 ± 0.75 | 115.2 ± 0.76 | 96.7 ± 1.47 | n = 15 | [RO4] Roche cobas c311/c501/c502/c701 |
| 106.2 ± 1.19 | 101.2 ± 1.10 | 95.8 ± 0.91 | 116.8 ± 0.95 | 99.0 ± 1.01 | n = 35 | [RO2] Roche Hitachi and Modular D/P |
| 109.0 ± 0.90 | 102.3 ± 0.89 | 98.5 ± 0.78 | 118.4 ± 0.89 | 101.1 ± 0.75 | n = 12 | [RO1] Roche Integra and MIRA |
| 108.5 ± 1.35 | 103.7 ± 1.03 | 97.8 ± 0.90 | 118.6 ± 1.00 | 101.3 ± 0.93 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 107.5 ± 2.06 | 99.9 ± 2.56 | 98.0 ± 1.53 | 118.0 ± 1.93 | 100.2 ± 1.94 | n = 97 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Albumin (g/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 5.42 ± 0.21 | 4.24 ± 0.18 | 3.73 ± 0.17 | 4.64 ± 0.16 | 4.00 ± 0.15 | n = 359 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 5.14 ± 0.10 | 4.20 ± 0.09 | 3.80 ± 0.09 | 4.53 ± 0.05 | 3.94 ± 0.10 | n = 3 | [AXA] Abaxis Piccolo |
| 5.16 ± 0.15 | 4.09 ± 0.15 | 3.56 ± 0.12 | 4.41 ± 0.16 | 3.87 ± 0.13 | n = 13 | [ABJ] Abbott Architect c System |
| 5.40 ± 0.12 | 4.29 ± 0.08 | 3.74 ± 0.07 | 4.65 ± 0.09 | 4.03 ± 0.09 | n = 52 | [OLC] Beckman Coulter AU Chemistry System |
| 5.26 ± 0.17 | 4.05 ± 0.13 | 3.52 ± 0.14 | 4.42 ± 0.15 | 3.86 ± 0.16 | n = 9 | [BCS] Beckman Coulter CX |
| 5.28 ± 0.08 | 4.02 ± 0.09 | 3.57 ± 0.09 | 4.46 ± 0.09 | 3.89 ± 0.07 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 5.16 ± 0.14 | 3.99 ± 0.08 | 3.48 ± 0.09 | 4.36 ± 0.09 | 3.77 ± 0.08 | n = 18 | [BCG] Beckman Coulter UniCel DxC 600 |
| 5.28 ± 0.06 | 4.04 ± 0.07 | 3.55 ± 0.07 | 4.44 ± 0.07 | 3.85 ± 0.07 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 5.29 ± 0.17 | 4.00 ± 0.08 | 3.53 ± 0.11 | 4.63 ± 0.12 | 3.85 ± 0.08 | n = 13 | [JJE] Ortho Vitros 250/350/950 |
| 5.37 ± 0.17 | 3.99 ± 0.13 | 3.51 ± 0.09 | 4.59 ± 0.14 | 3.80 ± 0.12 | n = 21 | [JJF] Ortho Vitros 5,1FS |
| 5.33 ± 0.20 | 4.03 ± 0.12 | 3.53 ± 0.10 | 4.61 ± 0.14 | 3.83 ± 0.10 | n = 6 | [JJG] Ortho Vitros 5600 |
| 5.48 ± 0.14 | 4.42 ± 0.12 | 3.91 ± 0.08 | 4.74 ± 0.12 | 4.15 ± 0.12 | n = 13 | [ROC] Roche cobas c501 |
| 5.26 ± 0.08 | 4.23 ± 0.08 | 3.71 ± 0.05 | 4.57 ± 0.08 | 3.99 ± 0.07 | n = 12 | [ROT] Roche Cobas INTEGRA |
| 5.50 ± 0.13 | 4.39 ± 0.08 | 3.88 ± 0.09 | 4.74 ± 0.09 | 4.15 ± 0.09 | n = 36 | [ROD] Roche MODULAR D/P |
| 5.32 ± 0.05 | 4.32 ± 0.04 | 3.76 ± 0.06 | 4.67 ± 0.06 | 4.02 ± 0.04 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 5.36 ± 0.10 | 4.30 ± 0.09 | 3.73 ± 0.05 | 4.63 ± 0.05 | 3.97 ± 0.14 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 5.67 ± 0.08 | 4.30 ± 0.00 | 3.80 ± 0.00 | 4.72 ± 0.08 | 4.07 ± 0.06 | n = 11 | [DUE] Siemens Dimension EXL |
| 5.64 ± 0.09 | 4.34 ± 0.09 | 3.83 ± 0.08 | 4.73 ± 0.09 | 4.06 ± 0.10 | n = 37 | [DUR] Siemens Dimension RxL |
| 5.60 ± 0.12 | 4.34 ± 0.10 | 3.84 ± 0.09 | 4.72 ± 0.10 | 4.07 ± 0.10 | n = 29 | [DUT] Siemens Dimension Vista |
| 5.64 ± 0.08 | 4.34 ± 0.08 | 3.84 ± 0.06 | 4.77 ± 0.07 | 4.08 ± 0.04 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 5.14 ± 0.10 | 4.20 ± 0.09 | 3.80 ± 0.09 | 4.53 ± 0.05 | 3.94 ± 0.10 | n = 3 | [AX1] Abaxis |
| 5.16 ± 0.15 | 4.09 ± 0.15 | 3.56 ± 0.12 | 4.41 ± 0.16 | 3.87 ± 0.13 | n = 13 | [AB1] Abbott |
| 5.24 ± 0.11 | 4.01 ± 0.08 | 3.52 ± 0.09 | 4.40 ± 0.09 | 3.83 ± 0.09 | n = 56 | [BC1] Beckman Coulter |
| 5.40 ± 0.11 | 4.30 ± 0.08 | 3.74 ± 0.07 | 4.65 ± 0.10 | 4.03 ± 0.09 | n = 51 | [OL1] Beckman Coulter AU Series |
| 5.36 ± 0.15 | 4.11 ± 0.13 | 3.61 ± 0.13 | 4.54 ± 0.15 | 3.95 ± 0.16 | n = 5 | [CR1] Carolina |
| 5.55 ± 0.19 | 4.20 ± 0.09 | 3.67 ± 0.05 | 4.50 ± 0.00 | 4.07 ± 0.05 | n = 3 | [DG1] Diagnostic Chemicals Ltd - Endpoint |
| 5.17 ± 0.05 | 4.10 ± 0.09 | 3.80 ± 0.09 | 4.53 ± 0.05 | 3.95 ± 0.27 | n = 3 | [JA1] JAS Diagnostics |
| 5.33 ± 0.18 | 4.00 ± 0.12 | 3.52 ± 0.10 | 4.60 ± 0.14 | 3.81 ± 0.11 | n = 41 | [JJ1] Ortho Clinical Diagnostics |
| 5.47 ± 0.14 | 4.41 ± 0.12 | 3.90 ± 0.09 | 4.74 ± 0.11 | 4.15 ± 0.11 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 5.50 ± 0.13 | 4.39 ± 0.07 | 3.89 ± 0.09 | 4.74 ± 0.09 | 4.15 ± 0.09 | n = 35 | [RO2] Roche Hitachi and Modular D/P |
| 5.26 ± 0.08 | 4.23 ± 0.08 | 3.71 ± 0.05 | 4.57 ± 0.08 | 3.99 ± 0.07 | n = 12 | [RO1] Roche Integra and MIRA |
| 5.34 ± 0.07 | 4.33 ± 0.06 | 3.77 ± 0.06 | 4.67 ± 0.06 | 4.03 ± 0.07 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 5.63 ± 0.09 | 4.34 ± 0.09 | 3.83 ± 0.08 | 4.73 ± 0.09 | 4.07 ± 0.08 | n = 97 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Total Protein (g/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 8.24 ± 0.25 | 6.99 ± 0.21 | 6.13 ± 0.18 | 7.49 ± 0.22 | 6.46 ± 0.20 | n = 361 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 8.21 ± 0.20 | 6.91 ± 0.20 | 6.10 ± 0.09 | 7.50 ± 0.09 | 6.43 ± 0.14 | n = 3 | [AXA] Abaxis Piccolo |
| 8.14 ± 0.08 | 6.88 ± 0.05 | 6.07 ± 0.05 | 7.37 ± 0.05 | 6.35 ± 0.06 | n = 13 | [ABJ] Abbott Architect c System |
| 8.13 ± 0.16 | 6.91 ± 0.14 | 6.06 ± 0.13 | 7.40 ± 0.16 | 6.39 ± 0.14 | n = 51 | [OLC] Beckman Coulter AU Chemistry System |
| 8.17 ± 0.09 | 6.99 ± 0.32 | 6.07 ± 0.19 | 7.44 ± 0.13 | 6.41 ± 0.22 | n = 9 | [BCS] Beckman Coulter CX |
| 7.93 ± 0.13 | 6.78 ± 0.08 | 5.95 ± 0.11 | 7.24 ± 0.12 | 6.18 ± 0.12 | n = 13 | [BCX] Beckman Coulter LX-20 |
| 8.07 ± 0.19 | 6.85 ± 0.17 | 5.99 ± 0.14 | 7.30 ± 0.22 | 6.31 ± 0.18 | n = 17 | [BCG] Beckman Coulter UniCel DxC 600 |
| 7.91 ± 0.17 | 6.77 ± 0.18 | 5.92 ± 0.14 | 7.25 ± 0.17 | 6.23 ± 0.18 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 8.39 ± 0.18 | 6.98 ± 0.15 | 6.12 ± 0.12 | 7.56 ± 0.22 | 6.52 ± 0.17 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 8.34 ± 0.22 | 6.92 ± 0.18 | 6.02 ± 0.17 | 7.43 ± 0.19 | 6.37 ± 0.17 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 8.53 ± 0.17 | 7.07 ± 0.07 | 6.10 ± 0.00 | 7.63 ± 0.05 | 6.50 ± 0.06 | n = 6 | [JJG] Ortho Vitros 5600 |
| 8.16 ± 0.18 | 6.94 ± 0.21 | 6.11 ± 0.14 | 7.46 ± 0.17 | 6.46 ± 0.15 | n = 13 | [ROC] Roche cobas c501 |
| 8.11 ± 0.17 | 6.88 ± 0.18 | 6.09 ± 0.15 | 7.42 ± 0.21 | 6.39 ± 0.21 | n = 13 | [ROT] Roche Cobas INTEGRA |
| 8.15 ± 0.14 | 6.93 ± 0.11 | 6.15 ± 0.10 | 7.43 ± 0.11 | 6.46 ± 0.11 | n = 36 | [ROD] Roche MODULAR D/P |
| 8.27 ± 0.12 | 7.09 ± 0.09 | 6.18 ± 0.10 | 7.55 ± 0.11 | 6.53 ± 0.11 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 8.16 ± 0.10 | 7.00 ± 0.09 | 6.06 ± 0.10 | 7.37 ± 0.23 | 6.35 ± 0.19 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 8.47 ± 0.10 | 7.19 ± 0.13 | 6.31 ± 0.08 | 7.69 ± 0.09 | 6.61 ± 0.08 | n = 11 | [DUE] Siemens Dimension EXL |
| 8.50 ± 0.16 | 7.21 ± 0.12 | 6.33 ± 0.10 | 7.74 ± 0.13 | 6.68 ± 0.11 | n = 37 | [DUR] Siemens Dimension RxL |
| 8.41 ± 0.15 | 7.13 ± 0.13 | 6.27 ± 0.12 | 7.66 ± 0.12 | 6.59 ± 0.12 | n = 29 | [DUT] Siemens Dimension Vista |
| 8.49 ± 0.14 | 7.18 ± 0.12 | 6.30 ± 0.12 | 7.75 ± 0.22 | 6.64 ± 0.14 | n = 20 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 8.21 ± 0.20 | 6.91 ± 0.20 | 6.10 ± 0.09 | 7.50 ± 0.09 | 6.43 ± 0.14 | n = 3 | [AX1] Abaxis |
| 8.14 ± 0.08 | 6.88 ± 0.05 | 6.07 ± 0.05 | 7.37 ± 0.05 | 6.35 ± 0.06 | n = 13 | [AB1] Abbott |
| 7.98 ± 0.19 | 6.80 ± 0.16 | 5.96 ± 0.13 | 7.27 ± 0.18 | 6.25 ± 0.17 | n = 58 | [BC1] Beckman Coulter |
| 8.13 ± 0.15 | 6.91 ± 0.13 | 6.07 ± 0.12 | 7.40 ± 0.16 | 6.39 ± 0.14 | n = 50 | [OL1] Beckman Coulter AU Series |
| 8.17 ± 0.08 | 7.14 ± 0.44 | 6.18 ± 0.32 | 7.55 ± 0.30 | 6.48 ± 0.32 | n = 5 | [CR1] Carolina |
| 8.50 ± 0.46 | 7.15 ± 0.45 | 6.35 ± 0.36 | 7.65 ± 0.36 | 6.50 ± 0.27 | n = 3 | [JA1] JAS Diagnostics |
| 8.38 ± 0.21 | 6.96 ± 0.17 | 6.07 ± 0.15 | 7.51 ± 0.20 | 6.44 ± 0.17 | n = 42 | [JJ1] Ortho Clinical Diagnostics |
| 8.17 ± 0.17 | 6.96 ± 0.19 | 6.12 ± 0.13 | 7.47 ± 0.16 | 6.46 ± 0.15 | n = 13 | [RO4] Roche cobas c311/c501/c502/c701 |
| 8.15 ± 0.14 | 6.93 ± 0.11 | 6.15 ± 0.10 | 7.43 ± 0.11 | 6.46 ± 0.11 | n = 36 | [RO2] Roche Hitachi and Modular D/P |
| 8.11 ± 0.17 | 6.88 ± 0.18 | 6.09 ± 0.15 | 7.42 ± 0.21 | 6.39 ± 0.21 | n = 13 | [RO1] Roche Integra and MIRA |
| 8.27 ± 0.12 | 7.08 ± 0.09 | 6.17 ± 0.11 | 7.56 ± 0.11 | 6.51 ± 0.10 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 8.47 ± 0.15 | 7.18 ± 0.13 | 6.30 ± 0.11 | 7.70 ± 0.13 | 6.64 ± 0.13 | n = 96 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Cholesterol (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 215.7 ± 6.51 | 154.9 ± 5.49 | 152.5 ± 5.23 | 172.8 ± 5.78 | 149.0 ± 4.96 | n = 333 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 217.8 ± 4.11 | 158.3 ± 3.07 | 152.1 ± 2.86 | 174.5 ± 4.53 | 147.7 ± 2.26 | n = 3 | [AXA] Abaxis Piccolo |
| 219.8 ± 1.34 | 156.8 ± 1.30 | 156.9 ± 1.67 | 175.9 ± 1.24 | 152.5 ± 1.08 | n = 13 | [ABJ] Abbott Architect c System |
| 213.4 ± 4.60 | 150.5 ± 2.76 | 150.4 ± 2.95 | 169.1 ± 3.25 | 146.4 ± 2.65 | n = 54 | [OLC] Beckman Coulter AU Chemistry System |
| 213.7 ± 4.83 | 153.7 ± 5.71 | 150.0 ± 5.98 | 174.0 ± 3.86 | 145.7 ± 3.72 | n = 9 | [BCS] Beckman Coulter CX |
| 211.9 ± 5.04 | 154.3 ± 3.40 | 149.7 ± 3.10 | 168.8 ± 4.64 | 144.5 ± 2.90 | n = 10 | [BCX] Beckman Coulter LX-20 |
| 212.3 ± 4.14 | 152.2 ± 4.55 | 148.5 ± 2.77 | 168.4 ± 4.22 | 144.7 ± 3.96 | n = 15 | [BCG] Beckman Coulter UniCel DxC 600 |
| 212.7 ± 2.63 | 154.9 ± 1.38 | 148.7 ± 2.25 | 169.4 ± 2.57 | 146.6 ± 2.50 | n = 19 | [BCH] Beckman Coulter UniCel DxC 800 |
| 233.4 ± 7.04 | 171.2 ± 3.19 | 162.3 ± 4.49 | 185.1 ± 2.80 | 161.1 ± 3.55 | n = 6 | [JJE] Ortho Vitros 250/350/950 |
| 236.3 ± 5.18 | 169.7 ± 3.10 | 158.7 ± 4.36 | 185.8 ± 4.26 | 157.1 ± 2.35 | n = 21 | [JJF] Ortho Vitros 5,1FS |
| 239.5 ± 6.41 | 172.0 ± 0.93 | 160.1 ± 4.18 | 187.8 ± 5.14 | 158.6 ± 4.59 | n = 6 | [JJG] Ortho Vitros 5600 |
| 219.1 ± 5.19 | 156.6 ± 3.67 | 156.6 ± 3.86 | 174.7 ± 4.29 | 151.7 ± 4.65 | n = 12 | [ROC] Roche cobas c501 |
| 215.7 ± 4.79 | 153.7 ± 2.20 | 154.3 ± 2.69 | 172.3 ± 2.83 | 149.5 ± 2.62 | n = 15 | [ROT] Roche Cobas INTEGRA |
| 218.6 ± 4.32 | 156.6 ± 2.85 | 155.8 ± 2.94 | 174.2 ± 3.15 | 150.6 ± 3.08 | n = 37 | [ROD] Roche MODULAR D/P |
| 214.2 ± 2.93 | 157.9 ± 2.46 | 151.9 ± 2.88 | 171.1 ± 2.74 | 147.9 ± 2.96 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 215.5 ± 1.86 | 154.7 ± 5.09 | 150.6 ± 4.72 | 169.0 ± 5.41 | 146.1 ± 5.22 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 215.9 ± 4.30 | 154.2 ± 3.89 | 150.9 ± 4.42 | 172.8 ± 4.46 | 147.7 ± 3.79 | n = 11 | [DUE] Siemens Dimension EXL |
| 215.7 ± 6.36 | 154.4 ± 4.01 | 150.8 ± 4.96 | 174.1 ± 4.73 | 150.0 ± 4.04 | n = 28 | [DUR] Siemens Dimension RxL |
| 212.4 ± 6.28 | 152.5 ± 4.72 | 150.2 ± 6.20 | 170.5 ± 6.36 | 146.4 ± 5.19 | n = 26 | [DUT] Siemens Dimension Vista |
| 214.1 ± 3.68 | 153.4 ± 1.97 | 150.7 ± 4.11 | 174.3 ± 2.27 | 149.7 ± 2.53 | n = 15 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 217.8 ± 4.11 | 158.3 ± 3.07 | 152.1 ± 2.86 | 174.5 ± 4.53 | 147.7 ± 2.26 | n = 3 | [AX1] Abaxis |
| 219.8 ± 1.34 | 156.8 ± 1.30 | 156.9 ± 1.67 | 175.9 ± 1.24 | 152.5 ± 1.08 | n = 13 | [AB1] Abbott |
| 212.6 ± 4.03 | 154.1 ± 3.53 | 148.9 ± 2.91 | 169.3 ± 3.99 | 145.8 ± 3.30 | n = 49 | [BC1] Beckman Coulter |
| 213.7 ± 4.41 | 150.5 ± 2.73 | 150.4 ± 2.90 | 169.2 ± 3.27 | 146.4 ± 2.71 | n = 51 | [OL1] Beckman Coulter AU Series |
| 211.3 ± 5.39 | 149.0 ± 6.03 | 147.6 ± 7.08 | 172.8 ± 7.16 | 143.5 ± 1.22 | n = 5 | [CR1] Carolina |
| 227.4 ± 12.69 | 165.3 ± 9.49 | 165.8 ± 11.16 | 185.1 ± 11.54 | 149.6 ± 11.79 | n = 3 | [JA1] JAS Diagnostics |
| 236.4 ± 6.13 | 170.2 ± 3.19 | 159.6 ± 4.54 | 186.1 ± 4.39 | 158.0 ± 3.36 | n = 33 | [JJ1] Ortho Clinical Diagnostics |
| 219.1 ± 5.19 | 156.6 ± 3.67 | 156.6 ± 3.86 | 174.7 ± 4.29 | 151.7 ± 4.65 | n = 12 | [RO4] Roche cobas c311/c501/c502/c701 |
| 218.3 ± 4.43 | 156.6 ± 3.08 | 155.8 ± 3.06 | 174.2 ± 3.09 | 150.7 ± 3.07 | n = 38 | [RO2] Roche Hitachi and Modular D/P |
| 215.7 ± 4.79 | 153.7 ± 2.20 | 154.3 ± 2.69 | 172.3 ± 2.83 | 149.5 ± 2.62 | n = 15 | [RO1] Roche Integra and MIRA |
| 214.6 ± 2.83 | 158.0 ± 2.38 | 151.7 ± 3.11 | 171.5 ± 3.13 | 148.2 ± 3.03 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 214.5 ± 5.79 | 153.7 ± 3.84 | 150.6 ± 5.13 | 172.9 ± 4.98 | 148.7 ± 4.24 | n = 80 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**HDL-Cholesterol (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 69.8 ± 7.37 | 41.1 ± 4.96 | 35.1 ± 4.08 | 49.0 ± 5.77 | 41.9 ± 4.61 | n = 314 | [---] All Methods & Instruments |
| 72.6 ± 9.12 | 40.1 ± 6.89 | 35.2 ± 6.33 | 51.5 ± 7.41 | 42.6 ± 6.01 | n = 14 | [---] All Precipitation Methods |
| 69.7 ± 7.26 | 41.1 ± 4.87 | 35.1 ± 3.99 | 48.9 ± 5.67 | 41.9 ± 4.54 | n = 300 | [---] All Homogeneous (Direct) Methods |
| 57.4 ± 1.02 | 30.1 ± 2.86 | 25.0 ± 1.80 | 38.3 ± 5.09 | 30.0 ± 0.90 | n = 3 | [AX1] Abaxis |
| 72.1 ± 2.26 | 44.3 ± 1.60 | 35.7 ± 2.11 | 51.9 ± 1.54 | 44.9 ± 1.83 | n = 12 | [AB1] Abbott |
| 77.3 ± 3.10 | 46.4 ± 2.38 | 40.0 ± 2.03 | 54.9 ± 2.52 | 46.5 ± 1.81 | n = 42 | [BC1] Beckman Coulter |
| 73.6 ± 3.28 | 44.5 ± 1.98 | 35.1 ± 1.76 | 52.6 ± 2.52 | 44.9 ± 2.14 | n = 36 | [OL1] Beckman Coulter AU Series |
| 75.8 ± 5.05 | 46.1 ± 2.70 | 36.9 ± 2.88 | 54.2 ± 3.55 | 46.8 ± 2.55 | n = 5 | [EQ1/GZ1] Equal/Genzyme |
| 81.6 ± 3.17 | 45.9 ± 1.63 | 38.3 ± 1.31 | 56.4 ± 2.32 | 47.3 ± 1.54 | n = 28 | [JJ1] Ortho Clinical Diagnostics |
| 64.5 ± 1.55 | 37.3 ± 0.80 | 32.2 ± 0.65 | 44.2 ± 0.94 | 38.3 ± 1.11 | n = 9 | [RO4] Roche cobas c311/c501/c502/c701 |
| 66.0 ± 1.80 | 39.0 ± 1.23 | 35.6 ± 1.69 | 46.2 ± 1.60 | 39.6 ± 1.16 | n = 43 | [RO2] Roche Hitachi and Modular D/P |
| 64.3 ± 2.69 | 37.2 ± 1.76 | 32.8 ± 1.97 | 44.5 ± 2.23 | 38.3 ± 1.84 | n = 12 | [RO1] Roche Integra and MIRA |
| 64.6 ± 2.02 | 35.1 ± 1.13 | 24.4 ± 0.88 | 43.6 ± 1.28 | 36.5 ± 1.17 | n = 22 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 74.0 ± 2.71 | 43.5 ± 1.53 | 33.3 ± 1.24 | 52.2 ± 2.03 | 44.0 ± 0.68 | n = 7 | [DA7] Siemens Dimension HDL (DF48A/K3048) |
| 64.6 ± 2.64 | 37.8 ± 1.89 | 33.3 ± 1.58 | 44.9 ± 1.96 | 38.8 ± 1.67 | n = 68 | [DA5] Siemens Dimension HDL (DF48B/K3048A |

**Summary of Participant Performance (Mean and Standard Deviation)**

**LDL-Cholesterol (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 114.5 ± 13.14 | 88.8 ± 12.19 | 96.0 ± 13.25 | 96.2 ± 12.92 | 85.2 ± 12.94 | n = 300 | [---] All Methods |
| 119.2 ± 9.53 | 93.5 ± 7.45 | 103.1 ± 6.33 | 101.8 ± 8.01 | 92.3 ± 6.72 | n = 160 | [-A-] All Calculated Results<br>Friedewald formula [LDL=TC-HDL-(Trigs÷5)] |
| 107.9 ± 14.48 | 81.4 ± 13.69 | 85.2 ± 13.01 | 87.9 ± 13.80 | 74.9 ± 12.02 | n = 138 | [---] All Homogeneous (Direct) Methods |
| 105.0 ± 7.41 | 79.1 ± 5.36 | 84.7 ± 3.02 | 85.4 ± 7.08 | 71.9 ± 2.04 | n = 5 | [AB1] Abbott |
| 96.6 ± 2.41 | 69.8 ± 2.15 | 76.2 ± 2.84 | 76.6 ± 1.56 | 65.3 ± 1.91 | n = 21 | [BC1] Beckman Coulter |
| 91.1 ± 4.89 | 66.4 ± 3.79 | 70.8 ± 3.67 | 72.5 ± 5.02 | 62.5 ± 4.34 | n = 17 | [OL1] Beckman Coulter AU Series |
| 96.8 ± 8.71 | 73.9 ± 9.07 | 78.3 ± 11.28 | 78.8 ± 9.16 | 68.1 ± 7.61 | n = 14 | [EQ1/GZ1] Equal/Genzyme |
| 118.8 ± 5.61 | 84.0 ± 4.92 | 86.4 ± 4.35 | 92.5 ± 2.64 | 76.8 ± 2.93 | n = 10 | [JJ1] Ortho Clinical Diagnostics |
| 132.0 ± 1.14 | 105.5 ± 1.71 | 105.5 ± 3.99 | 114.0 ± 3.42 | 97.0 ± 1.14 | n = 2 | [RO4] Roche cobas c311/c501/c502/c701 |
| 130.6 ± 2.19 | 106.6 ± 2.33 | 105.7 ± 2.25 | 113.4 ± 2.01 | 97.6 ± 1.88 | n = 14 | [RO2] Roche Hitachi and Modular D/P |
| 114.2 ± 4.98 | 82.2 ± 4.19 | 83.3 ± 4.39 | 89.6 ± 4.83 | 74.3 ± 3.49 | n = 11 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 112.6 ± 6.03 | 88.5 ± 6.11 | 93.7 ± 6.26 | 94.2 ± 6.51 | 80.7 ± 5.57 | n = 33 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Triglycerides (mg/dL)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 147.5 ± 7.19 | 113.6 ± 5.56 | 79.3 ± 4.18 | 118.6 ± 5.57 | 81.0 ± 3.80 | n = 324 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 164.0 ± 10.00 | 125.0 ± 10.10 | 92.3 ± 7.75 | 129.6 ± 5.58 | 89.9 ± 5.22 | n = 3 | [AXA] Abaxis Piccolo |
| 144.9 ± 1.51 | 114.1 ± 1.82 | 77.5 ± 0.95 | 116.0 ± 0.92 | 79.6 ± 1.12 | n = 14 | [ABJ] Abbott Architect c System |
| 145.7 ± 3.17 | 108.9 ± 3.12 | 77.7 ± 1.97 | 116.4 ± 3.04 | 79.5 ± 2.26 | n = 53 | [OLC] Beckman Coulter AU Chemistry System |
| 148.1 ± 10.01 | 115.6 ± 11.75 | 86.8 ± 9.18 | 122.5 ± 9.16 | 84.0 ± 7.04 | n = 9 | [BCS] Beckman Coulter CX |
| 147.7 ± 6.48 | 114.9 ± 5.97 | 80.2 ± 4.10 | 118.7 ± 5.78 | 81.3 ± 3.83 | n = 10 | [BCX] Beckman Coulter LX-20 |
| 146.9 ± 4.60 | 114.5 ± 4.41 | 80.5 ± 3.06 | 118.3 ± 3.21 | 81.3 ± 1.89 | n = 12 | [BCG] Beckman Coulter UniCel DxC 600 |
| 149.7 ± 5.71 | 116.3 ± 4.04 | 81.3 ± 3.31 | 120.1 ± 4.48 | 82.4 ± 3.34 | n = 16 | [BCH] Beckman Coulter UniCel DxC 800 |
| 168.1 ± 2.97 | 127.4 ± 2.96 | 85.6 ± 2.21 | 135.3 ± 3.03 | 87.6 ± 2.87 | n = 6 | [JJE] Ortho Vitros 250/350/950 |
| 160.8 ± 5.54 | 119.4 ± 4.73 | 80.2 ± 3.24 | 126.1 ± 4.83 | 82.6 ± 3.02 | n = 21 | [JJF] Ortho Vitros 5,1FS |
| 160.8 ± 2.11 | 119.9 ± 1.67 | 80.1 ± 2.27 | 125.0 ± 3.46 | 82.7 ± 1.13 | n = 6 | [JJG] Ortho Vitros 5600 |
| 146.4 ± 1.57 | 116.5 ± 1.88 | 84.1 ± 2.01 | 122.3 ± 1.76 | 84.8 ± 1.45 | n = 12 | [ROC] Roche cobas c501 |
| 141.8 ± 3.94 | 111.2 ± 2.29 | 79.2 ± 1.98 | 117.9 ± 2.76 | 81.4 ± 1.37 | n = 13 | [ROT] Roche Cobas INTEGRA |
| 143.0 ± 4.20 | 113.1 ± 2.71 | 79.0 ± 2.18 | 117.1 ± 2.93 | 80.3 ± 2.15 | n = 37 | [ROD] Roche MODULAR D/P |
| 146.7 ± 2.34 | 113.1 ± 1.86 | 78.6 ± 1.68 | 117.0 ± 1.84 | 80.6 ± 1.84 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 149.9 ± 8.08 | 116.7 ± 9.49 | 83.2 ± 7.68 | 120.4 ± 8.97 | 84.6 ± 8.43 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 146.7 ± 2.61 | 111.7 ± 2.79 | 76.7 ± 3.45 | 114.9 ± 2.16 | 77.4 ± 1.50 | n = 11 | [DUE] Siemens Dimension EXL |
| 144.3 ± 4.47 | 111.1 ± 4.21 | 74.6 ± 4.28 | 115.1 ± 3.22 | 77.3 ± 2.99 | n = 29 | [DUR] Siemens Dimension RxL |
| 156.9 ± 4.82 | 121.8 ± 4.55 | 85.7 ± 3.79 | 126.2 ± 3.87 | 86.5 ± 2.42 | n = 27 | [DUT] Siemens Dimension Vista |
| 144.6 ± 2.94 | 109.2 ± 2.52 | 75.1 ± 2.32 | 114.1 ± 1.81 | 77.6 ± 2.43 | n = 12 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 164.0 ± 10.00 | 125.0 ± 10.10 | 92.3 ± 7.75 | 129.6 ± 5.58 | 89.9 ± 5.22 | n = 3 | [AX1] Abaxis |
| 144.9 ± 1.51 | 114.1 ± 1.82 | 77.5 ± 0.95 | 116.0 ± 0.92 | 79.6 ± 1.12 | n = 14 | [AB1] Abbott |
| 148.2 ± 6.05 | 115.2 ± 4.75 | 80.9 ± 3.50 | 119.0 ± 4.61 | 81.4 ± 3.26 | n = 45 | [BC1] Beckman Coulter |
| 145.8 ± 3.16 | 109.0 ± 2.86 | 77.6 ± 1.97 | 116.3 ± 3.00 | 79.4 ± 2.05 | n = 49 | [OL1] Beckman Coulter AU Series |
| 149.3 ± 13.10 | 118.9 ± 15.34 | 90.4 ± 12.73 | 125.6 ± 14.48 | 89.3 ± 10.70 | n = 5 | [CR1] Carolina |
| 155.0 ± 8.16 | 108.5 ± 5.40 | 77.5 ± 6.32 | 124.7 ± 5.86 | 83.9 ± 4.38 | n = 3 | [JA1] JAS Diagnostics |
| 162.0 ± 5.88 | 120.6 ± 5.41 | 81.0 ± 3.69 | 127.3 ± 5.94 | 83.2 ± 3.47 | n = 33 | [JJ1] Ortho Clinical Diagnostics |
| 146.4 ± 1.57 | 116.5 ± 1.88 | 84.1 ± 2.01 | 122.3 ± 1.76 | 84.8 ± 1.45 | n = 12 | [RO4] Roche cobas c311/c501/c502/c701 |
| 143.0 ± 4.40 | 112.9 ± 2.64 | 79.1 ± 2.29 | 117.1 ± 2.93 | 80.4 ± 2.20 | n = 37 | [RO2] Roche Hitachi and Modular D/P |
| 142.1 ± 3.77 | 111.5 ± 2.51 | 79.3 ± 1.87 | 118.1 ± 2.59 | 81.5 ± 1.28 | n = 14 | [RO1] Roche Integra and MIRA |
| 146.7 ± 2.40 | 113.1 ± 1.96 | 78.8 ± 1.72 | 117.0 ± 1.94 | 80.7 ± 1.80 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 148.7 ± 7.37 | 114.4 ± 6.96 | 78.6 ± 6.62 | 118.1 ± 6.91 | 80.5 ± 5.39 | n = 78 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Homocysteine (µmol/L)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 16.70 ± 1.60 | 10.58 ± 1.12 | 27.14 ± 2.17 | 11.38 ± 1.23 | 9.77 ± 1.10 | n = 127 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 16.97 ± 0.68 | 11.40 ± 0.54 | 28.30 ± 0.79 | 12.24 ± 0.51 | 10.70 ± 0.35 | n = 7 | [ABH] Abbott Architect i System |
| 17.63 ± 0.32 | 11.31 ± 0.59 | 28.71 ± 0.70 | 12.55 ± 0.53 | 10.97 ± 0.12 | n = 8 | [ABB] Abbott AxSym |
| 17.40 ± 1.07 | 10.95 ± 0.78 | 27.70 ± 1.32 | 11.71 ± 0.84 | 9.85 ± 0.73 | n = 17 | [OLC] Beckman Coulter AU Chemistry System |
| 18.55 ± 1.01 | 11.95 ± 0.72 | 28.83 ± 1.49 | 12.44 ± 0.82 | 10.58 ± 0.92 | n = 5 | [BCH] Beckman Coulter UniCel DxC 800 |
| 17.31 ± 1.38 | 10.91 ± 1.01 | 27.99 ± 1.08 | 11.67 ± 0.76 | 9.88 ± 0.78 | n = 3 | [JJF] Ortho Vitros 5,1FS |
| 17.60 ± 1.06 | 11.25 ± 0.77 | 26.27 ± 1.22 | 12.07 ± 0.97 | 10.11 ± 0.82 | n = 6 | [ROD] Roche MODULAR D/P |
| 14.49 ± 0.81 | 9.28 ± 0.65 | 24.15 ± 1.23 | 9.96 ± 0.65 | 8.51 ± 0.74 | n = 22 | [COB] Siemens ADVIA Centaur |
| 15.36 ± 0.79 | 9.99 ± 0.41 | 26.09 ± 1.47 | 10.78 ± 0.71 | 9.15 ± 0.44 | n = 8 | [DUT] Siemens Dimension Vista |
| 16.84 ± 1.01 | 10.32 ± 0.65 | 27.63 ± 1.95 | 11.33 ± 0.92 | 9.77 ± 0.91 | n = 26 | [DPD] Siemens Immulite 2000 |
| 16.78 ± 0.97 | 10.49 ± 1.12 | 27.03 ± 1.51 | 11.21 ± 1.24 | 9.82 ± 0.71 | n = 8 | [DPE] Siemens Immulite 2500 |
| | | | | | | <Reagents> |
| 17.41 ± 0.65 | 11.36 ± 0.57 | 28.53 ± 0.79 | 12.40 ± 0.56 | 10.88 ± 0.27 | n = 15 | [AB1] Abbott |
| 17.53 ± 0.93 | 11.26 ± 0.72 | 27.85 ± 1.27 | 11.89 ± 0.77 | 10.15 ± 0.59 | n = 8 | [CR1] Carolina |
| 17.85 ± 0.83 | 11.62 ± 0.41 | 28.63 ± 1.06 | 11.78 ± 0.41 | 9.77 ± 0.34 | n = 3 | [CC1] Catch, Inc |
| 17.88 ± 1.22 | 11.25 ± 1.04 | 27.60 ± 1.72 | 12.17 ± 1.04 | 10.39 ± 1.07 | n = 20 | [DZ1] Diazyme |
| 17.53 ± 1.49 | 11.76 ± 1.39 | 27.93 ± 2.48 | 12.00 ± 1.28 | 10.01 ± 1.20 | n = 3 | [EQ1] Equal Diagnostics |
| 16.93 ± 1.18 | 10.67 ± 0.86 | 27.40 ± 1.51 | 11.31 ± 0.88 | 9.46 ± 0.86 | n = 5 | [JJ1] Ortho Clinical Diagnostics |
| 14.49 ± 0.81 | 9.28 ± 0.65 | 24.15 ± 1.23 | 9.96 ± 0.65 | 8.51 ± 0.74 | n = 22 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 15.38 ± 0.89 | 9.98 ± 0.45 | 26.08 ± 1.67 | 10.89 ± 0.71 | 9.22 ± 0.58 | n = 7 | [DA5] Siemens Dimension |
| 16.82 ± 0.98 | 10.37 ± 0.75 | 27.53 ± 1.86 | 11.25 ± 0.98 | 9.76 ± 0.87 | n = 35 | [DP5] Siemens Immulite |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Troponin I (µg/L)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 0.019 ± 0.019 | 0.369 ± 0.117 | 0.018 ± 0.018 | 0.857 ± 0.153 | 0.816 ± 0.174 | n = 230 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 0.008 ± 0.008 | 2.219 ± 0.121 | 0.008 ± 0.008 | 5.241 ± 0.237 | 4.759 ± 0.211 | n = 15 | [ABH] Abbott Architect i System |
| 0.014 ± 0.010 | 0.287 ± 0.036 | 0.014 ± 0.010 | 0.641 ± 0.047 | 0.630 ± 0.100 | n = 6 | [ABB] Abbott AxSym |
| 0.011 ± 0.005 | 0.351 ± 0.041 | 0.010 ± 0.000 | 0.727 ± 0.067 | 0.718 ± 0.075 | n = 33 | [SAA] Beckman Coulter ACCESS |
| 0.050 ± 0.000 | 0.061 ± 0.025 | 0.050 ± 0.000 | 0.156 ± 0.092 | 0.154 ± 0.103 | n = 10 | [BSA] BioSite Triage |
| 0.027 ± 0.040 | 1.778 ± 0.131 | 0.025 ± 0.041 | 3.576 ± 0.305 | 3.763 ± 0.625 | n = 5 | [IAA] i-STAT |
| 0.014 ± 0.014 | 1.297 ± 0.044 | 0.014 ± 0.014 | 2.800 ± 0.065 | 2.546 ± 0.072 | n = 5 | [JJG] Ortho Vitros 5600 |
| 0.010 ± 0.000 | 1.275 ± 0.073 | 0.010 ± 0.000 | 2.720 ± 0.145 | 2.566 ± 0.130 | n = 13 | [JJC] Ortho Vitros ECi/ECiQ |
| 0.010 ± 0.007 | 0.348 ± 0.035 | 0.009 ± 0.007 | 0.883 ± 0.066 | 0.852 ± 0.067 | n = 40 | [COB] Siemens ADVIA Centaur |
| 0.018 ± 0.020 | 0.345 ± 0.034 | 0.018 ± 0.020 | 0.890 ± 0.085 | 0.876 ± 0.109 | n = 4 | [BYP] Siemens ADVIA Centaur CP |
| 0.065 ± 0.047 | 0.572 ± 0.052 | 0.065 ± 0.047 | 1.018 ± 0.060 | 1.012 ± 0.070 | n = 9 | [DUE] Siemens Dimension EXL |
| 0.039 ± 0.018 | 0.341 ± 0.055 | 0.036 ± 0.016 | 0.851 ± 0.074 | 0.762 ± 0.078 | n = 31 | [DUR] Siemens Dimension RxL |
| 0.020 ± 0.000 | 0.572 ± 0.058 | 0.020 ± 0.000 | 1.044 ± 0.085 | 1.054 ± 0.098 | n = 27 | [DUT] Siemens Dimension Vista |
| 0.034 ± 0.025 | 0.330 ± 0.046 | 0.024 ± 0.026 | 0.820 ± 0.107 | 0.734 ± 0.073 | n = 11 | [DUX] Siemens Dimension Xpand |
| 0.200 ± 0.000 | 1.006 ± 0.071 | 0.200 ± 0.000 | 1.832 ± 0.195 | 1.828 ± 0.230 | n = 6 | [DPD] Siemens Immulite 2000 |
| 0.060 ± 0.000 | 2.834 ± 0.126 | 0.060 ± 0.000 | 5.951 ± 0.287 | 5.493 ± 0.192 | n = 6 | [TOM] Tosoh Bioscience |
| | | | | | | <Reagents> |
| 0.009 ± 0.009 | 1.827 ± 0.879 | 0.009 ± 0.009 | 4.189 ± 2.075 | 3.952 ± 1.869 | n = 22 | [AB1] Abbott |
| 0.010 ± 0.006 | 0.350 ± 0.040 | 0.010 ± 0.000 | 0.723 ± 0.067 | 0.714 ± 0.074 | n = 35 | [BC1] Beckman Coulter |
| 0.050 ± 0.000 | 0.061 ± 0.025 | 0.050 ± 0.000 | 0.156 ± 0.092 | 0.154 ± 0.103 | n = 10 | [BS1] Biosite Diagnostics |
| 0.037 ± 0.043 | 1.737 ± 0.110 | 0.034 ± 0.045 | 3.480 ± 0.272 | 3.547 ± 0.453 | n = 4 | [IA1] i-STAT thermal cartridge |
| 0.010 ± 0.000 | 1.282 ± 0.067 | 0.010 ± 0.000 | 2.746 ± 0.132 | 2.558 ± 0.113 | n = 18 | [JJ1] Ortho Clinical Diagnostics |
| 0.303 ± 0.005 | 0.303 ± 0.005 | 0.303 ± 0.005 | 0.469 ± 0.037 | 0.455 ± 0.045 | n = 3 | [RO3] Roche Elecsys/Modular E/e601/e411 |
| 0.010 ± 0.006 | 0.348 ± 0.035 | 0.009 ± 0.007 | 0.883 ± 0.067 | 0.854 ± 0.069 | n = 45 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 0.036 ± 0.020 | 0.343 ± 0.063 | 0.032 ± 0.020 | 0.859 ± 0.101 | 0.764 ± 0.091 | n = 47 | [DA5] Siemens Dimension |
| 0.033 ± 0.035 | 0.570 ± 0.052 | 0.033 ± 0.035 | 1.031 ± 0.072 | 1.035 ± 0.084 | n = 31 | [DA6] Siemens Dimension LOCI |
| 0.200 ± 0.000 | 0.965 ± 0.118 | 0.200 ± 0.000 | 1.785 ± 0.214 | 1.763 ± 0.285 | n = 7 | [DP5] Siemens Immulite |
| 0.060 ± 0.000 | 2.821 ± 0.141 | 0.060 ± 0.000 | 5.913 ± 0.308 | 5.467 ± 0.209 | n = 5 | [TO2] Tosoh ST AIA |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Troponin T (µg/L)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 0.010 ± 0.000 | 0.303 ± 0.018 | 0.010 ± 0.000 | 0.600 ± 0.036 | 0.525 ± 0.031 | n = 29 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 0.010 ± 0.000 | 0.301 ± 0.012 | 0.010 ± 0.000 | 0.576 ± 0.031 | 0.515 ± 0.027 | n = 6 | [ROA] Roche cobas e601 |
| 0.010 ± 0.000 | 0.313 ± 0.023 | 0.010 ± 0.000 | 0.622 ± 0.039 | 0.542 ± 0.037 | n = 11 | [BME] Roche Elecsys |
| 0.010 ± 0.000 | 0.297 ± 0.006 | 0.010 ± 0.000 | 0.590 ± 0.019 | 0.513 ± 0.011 | n = 9 | [ROE] Roche MODULAR E |
| | | | | | | <Reagents> |
| 0.010 ± 0.000 | 0.304 ± 0.018 | 0.010 ± 0.000 | 0.601 ± 0.037 | 0.525 ± 0.031 | n = 25 | [RO3] Roche Elecsys/Modular E/e601/e411 |

Summary of Participant Performance (Mean and Standard Deviation)

**Alanine Aminotransferase (U/L 37°C)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 178.0 ± 10.08 | 46.4 ± 6.22 | 64.9 ± 6.30 | 196.6 ± 11.96 | 169.7 ± 10.72 | n = 363 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 157.8 ± 3.23 | 40.4 ± 1.02 | 58.5 ± 3.63 | 175.3 ± 2.26 | 149.0 ± 0.90 | n = 3 | [AXA] Abaxis Piccolo |
| 180.6 ± 4.87 | 42.2 ± 1.75 | 61.4 ± 2.36 | 198.0 ± 5.49 | 169.0 ± 4.84 | n = 13 | [ABJ] Abbott Architect c System |
| 157.5 ± 4.91 | 37.8 ± 1.52 | 55.3 ± 1.80 | 173.2 ± 5.12 | 148.6 ± 4.29 | n = 51 | [OLC] Beckman Coulter AU Chemistry System |
| 171.1 ± 4.81 | 43.1 ± 1.49 | 61.0 ± 2.48 | 189.6 ± 9.98 | 162.4 ± 9.65 | n = 9 | [BCS] Beckman Coulter CX |
| 175.9 ± 4.23 | 45.7 ± 1.09 | 62.7 ± 2.39 | 192.6 ± 5.89 | 166.1 ± 3.70 | n = 13 | [BCX] Beckman Coulter LX-20 |
| 175.4 ± 3.08 | 44.9 ± 1.37 | 62.5 ± 1.12 | 191.8 ± 4.21 | 164.8 ± 3.23 | n = 17 | [BCG] Beckman Coulter UniCel DxC 600 |
| 176.2 ± 2.70 | 45.3 ± 1.52 | 62.8 ± 1.38 | 192.6 ± 3.41 | 166.0 ± 2.99 | n = 22 | [BCH] Beckman Coulter UniCel DxC 800 |
| 177.7 ± 4.46 | 55.9 ± 2.65 | 76.4 ± 2.60 | 204.3 ± 6.75 | 179.0 ± 3.84 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 179.9 ± 6.38 | 56.5 ± 4.70 | 78.3 ± 5.73 | 203.8 ± 6.49 | 178.7 ± 5.88 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 179.0 ± 2.11 | 57.5 ± 4.31 | 76.5 ± 2.57 | 204.2 ± 4.99 | 178.6 ± 1.67 | n = 6 | [JJG] Ortho Vitros 5600 |
| 183.0 ± 3.70 | 43.6 ± 1.65 | 64.3 ± 1.50 | 203.3 ± 4.32 | 174.7 ± 4.80 | n = 13 | [ROC] Roche cobas c501 |
| 179.9 ± 3.47 | 42.4 ± 1.13 | 62.8 ± 1.54 | 199.0 ± 3.58 | 170.6 ± 2.38 | n = 14 | [ROT] Roche Cobas INTEGRA |
| 181.8 ± 5.58 | 44.0 ± 1.83 | 64.1 ± 2.43 | 200.5 ± 6.47 | 172.0 ± 5.37 | n = 36 | [ROD] Roche MODULAR D/P |
| 188.8 ± 3.43 | 47.0 ± 1.68 | 67.5 ± 2.04 | 207.8 ± 3.89 | 178.3 ± 2.94 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 186.7 ± 8.57 | 47.0 ± 1.80 | 65.7 ± 4.06 | 204.8 ± 8.71 | 172.8 ± 10.38 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 175.7 ± 7.14 | 51.7 ± 2.57 | 68.2 ± 1.61 | 192.9 ± 5.43 | 169.2 ± 6.55 | n = 12 | [DUE] Siemens Dimension EXL |
| 178.2 ± 5.45 | 53.2 ± 2.05 | 69.2 ± 2.59 | 196.1 ± 6.07 | 170.9 ± 5.60 | n = 36 | [DUR] Siemens Dimension RxL |
| 190.4 ± 3.38 | 48.2 ± 1.53 | 67.0 ± 1.50 | 209.4 ± 3.49 | 181.1 ± 3.12 | n = 29 | [DUT] Siemens Dimension Vista |
| 178.3 ± 5.68 | 52.9 ± 2.61 | 69.6 ± 2.43 | 195.9 ± 5.64 | 170.1 ± 4.29 | n = 19 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 157.8 ± 3.23 | 40.4 ± 1.02 | 58.5 ± 3.63 | 175.3 ± 2.26 | 149.0 ± 0.90 | n = 3 | [AX1] Abaxis |
| 180.6 ± 4.87 | 42.2 ± 1.75 | 61.4 ± 2.36 | 198.0 ± 5.49 | 169.0 ± 4.84 | n = 13 | [AB1] Abbott |
| 175.5 ± 3.68 | 45.0 ± 1.61 | 62.4 ± 1.69 | 191.8 ± 4.81 | 165.1 ± 3.69 | n = 58 | [BC1] Beckman Coulter |
| 157.3 ± 4.75 | 37.8 ± 1.54 | 55.3 ± 1.81 | 173.0 ± 4.94 | 148.4 ± 4.12 | n = 49 | [OL1] Beckman Coulter AU Series |
| 173.8 ± 6.31 | 43.5 ± 2.89 | 61.9 ± 3.64 | 196.4 ± 8.09 | 168.9 ± 10.18 | n = 5 | [CR1] Carolina |
| 174.1 ± 21.32 | 42.5 ± 5.43 | 59.3 ± 5.09 | 191.5 ± 19.84 | 161.3 ± 16.80 | n = 3 | [JA1] JAS Diagnostics |
| 179.0 ± 5.02 | 56.3 ± 3.96 | 77.2 ± 4.23 | 204.0 ± 6.27 | 178.7 ± 4.57 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 182.8 ± 3.24 | 43.6 ± 1.54 | 64.2 ± 1.45 | 203.0 ± 3.94 | 174.4 ± 4.54 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 181.5 ± 5.74 | 43.9 ± 1.89 | 64.0 ± 2.51 | 200.2 ± 6.69 | 171.8 ± 5.56 | n = 37 | [RO2] Roche Hitachi and Modular D/P |
| 179.9 ± 3.47 | 42.4 ± 1.13 | 62.8 ± 1.54 | 199.0 ± 3.58 | 170.6 ± 2.38 | n = 14 | [RO1] Roche Integra and MIRA |
| 187.6 ± 5.51 | 46.7 ± 1.81 | 66.8 ± 2.67 | 206.0 ± 6.16 | 176.9 ± 5.26 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 181.6 ± 8.33 | 51.4 ± 3.28 | 68.4 ± 2.44 | 199.6 ± 8.86 | 173.7 ± 7.38 | n = 95 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Aspartate Aminotransferase (U/L 37°C)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 118.2 ± 6.77 | 258.4 ± 12.99 | 80.6 ± 4.69 | 155.3 ± 8.36 | 133.3 ± 7.64 | n = 363 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 116.5 ± 4.61 | 244.8 ± 12.46 | 79.1 ± 2.05 | 150.6 ± 4.72 | 128.2 ± 4.10 | n = 3 | [AXA] Abaxis Piccolo |
| 118.4 ± 3.57 | 258.6 ± 5.70 | 79.9 ± 2.35 | 155.3 ± 3.64 | 132.2 ± 3.14 | n = 13 | [ABJ] Abbott Architect c System |
| 106.7 ± 3.50 | 231.3 ± 7.75 | 73.1 ± 2.53 | 138.7 ± 4.40 | 119.1 ± 4.00 | n = 51 | [OLC] Beckman Coulter AU Chemistry System |
| 119.0 ± 6.93 | 255.0 ± 14.74 | 79.3 ± 5.94 | 157.4 ± 12.26 | 134.4 ± 10.57 | n = 9 | [BCS] Beckman Coulter CX |
| 120.1 ± 3.36 | 256.8 ± 8.04 | 80.0 ± 1.79 | 154.8 ± 4.34 | 131.7 ± 4.83 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 119.5 ± 2.24 | 255.5 ± 5.39 | 79.8 ± 1.72 | 153.5 ± 3.73 | 131.2 ± 2.80 | n = 18 | [BCG] Beckman Coulter UniCel DxC 600 |
| 120.0 ± 2.44 | 256.5 ± 4.33 | 80.4 ± 1.47 | 154.8 ± 2.58 | 132.7 ± 2.07 | n = 22 | [BCH] Beckman Coulter UniCel DxC 800 |
| 120.8 ± 2.98 | 261.6 ± 6.30 | 82.6 ± 1.79 | 155.5 ± 3.77 | 132.6 ± 3.75 | n = 14 | [JJE] Ortho Vitros 250/350/950 |
| 120.0 ± 3.26 | 257.6 ± 6.90 | 82.3 ± 2.68 | 153.5 ± 5.80 | 130.7 ± 4.53 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 120.5 ± 2.93 | 258.8 ± 4.94 | 82.7 ± 0.97 | 154.4 ± 4.68 | 131.3 ± 3.75 | n = 6 | [JJG] Ortho Vitros 5600 |
| 122.7 ± 3.80 | 270.1 ± 7.64 | 83.5 ± 2.22 | 160.3 ± 5.35 | 139.1 ± 4.80 | n = 13 | [ROC] Roche cobas c501 |
| 121.4 ± 1.81 | 266.1 ± 3.27 | 82.7 ± 1.38 | 158.7 ± 2.66 | 136.1 ± 2.42 | n = 14 | [ROT] Roche Cobas INTEGRA |
| 122.8 ± 3.85 | 265.1 ± 6.46 | 83.6 ± 2.91 | 159.3 ± 5.20 | 136.8 ± 4.06 | n = 36 | [ROD] Roche MODULAR D/P |
| 129.9 ± 3.38 | 282.9 ± 5.58 | 89.9 ± 2.58 | 169.4 ± 4.18 | 146.3 ± 3.61 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 128.8 ± 7.82 | 274.5 ± 12.80 | 87.3 ± 3.16 | 163.8 ± 8.77 | 140.0 ± 10.85 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 114.1 ± 3.18 | 253.9 ± 5.14 | 79.0 ± 2.92 | 155.2 ± 4.92 | 134.7 ± 4.53 | n = 11 | [DUE] Siemens Dimension EXL |
| 116.4 ± 3.85 | 259.0 ± 6.33 | 80.7 ± 2.76 | 157.0 ± 5.03 | 136.0 ± 4.84 | n = 37 | [DUR] Siemens Dimension RxL |
| 114.1 ± 5.58 | 257.6 ± 7.71 | 77.3 ± 4.36 | 155.1 ± 5.97 | 133.6 ± 5.82 | n = 29 | [DUT] Siemens Dimension Vista |
| 117.4 ± 2.55 | 259.2 ± 4.93 | 81.4 ± 2.23 | 158.9 ± 3.74 | 136.5 ± 3.00 | n = 19 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 116.5 ± 4.61 | 244.8 ± 12.46 | 79.1 ± 2.05 | 150.6 ± 4.72 | 128.2 ± 4.10 | n = 3 | [AX1] Abaxis |
| 118.4 ± 3.57 | 258.6 ± 5.70 | 79.9 ± 2.35 | 155.3 ± 3.64 | 132.2 ± 3.14 | n = 13 | [AB1] Abbott |
| 119.5 ± 2.91 | 255.5 ± 5.85 | 79.9 ± 1.88 | 154.0 ± 3.68 | 131.7 ± 3.23 | n = 59 | [BC1] Beckman Coulter |
| 106.6 ± 3.30 | 231.1 ± 7.40 | 72.9 ± 2.31 | 138.6 ± 4.15 | 119.0 ± 3.78 | n = 49 | [OL1] Beckman Coulter AU Series |
| 125.1 ± 3.39 | 270.1 ± 15.95 | 83.5 ± 6.87 | 166.6 ± 7.63 | 142.4 ± 7.76 | n = 5 | [CR1] Carolina |
| 118.1 ± 6.08 | 259.1 ± 7.17 | 63.5 ± 34.65 | 153.6 ± 6.23 | 134.4 ± 7.34 | n = 3 | [JA1] JAS Diagnostics |
| 120.4 ± 3.08 | 259.1 ± 6.66 | 82.5 ± 1.97 | 154.6 ± 4.69 | 131.5 ± 4.15 | n = 43 | [JJ1] Ortho Clinical Diagnostics |
| 122.9 ± 3.70 | 270.4 ± 7.35 | 83.6 ± 2.17 | 160.4 ± 5.10 | 139.2 ± 4.57 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 122.6 ± 3.80 | 265.2 ± 6.32 | 83.5 ± 2.90 | 159.1 ± 5.15 | 136.6 ± 4.03 | n = 37 | [RO2] Roche Hitachi and Modular D/P |
| 121.3 ± 1.91 | 266.3 ± 3.54 | 82.8 ± 1.46 | 158.6 ± 2.75 | 135.9 ± 2.41 | n = 13 | [RO1] Roche Integra and MIRA |
| 128.9 ± 4.44 | 280.5 ± 8.35 | 88.9 ± 3.06 | 167.7 ± 5.58 | 145.0 ± 4.79 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 115.8 ± 4.30 | 258.1 ± 6.70 | 79.9 ± 3.54 | 156.6 ± 5.40 | 135.3 ± 4.95 | n = 94 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**α-Amylase (U/L 37°C)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 476.2 ± 83.83 | 54.8 ± 6.55 | 76.4 ± 8.37 | 118.9 ± 13.69 | 102.4 ± 12.17 | n = 318 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 514.4 ± 11.97 | 58.0 ± 0.92 | 78.4 ± 1.32 | 124.3 ± 2.74 | 107.4 ± 2.47 | n = 10 | [ABJ] Abbott Architect c System |
| 415.8 ± 22.82 | 45.4 ± 2.82 | 63.0 ± 3.90 | 100.2 ± 5.33 | 86.1 ± 4.93 | n = 41 | [OLC] Beckman Coulter AU Chemistry System |
| 649.0 ±165.90 | 72.2 ± 8.32 | 101.1 ± 16.29 | 157.7 ± 32.83 | 137.6 ± 30.64 | n = 4 | [BCS] Beckman Coulter CX |
| 492.0 ± 10.16 | 60.5 ± 1.50 | 83.4 ± 1.57 | 124.9 ± 2.60 | 107.1 ± 1.23 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 490.0 ± 8.98 | 60.4 ± 1.23 | 82.2 ± 2.02 | 125.5 ± 2.79 | 107.7 ± 2.05 | n = 15 | [BCG] Beckman Coulter UniCel DxC 600 |
| 492.6 ± 16.72 | 61.1 ± 2.19 | 83.3 ± 2.32 | 125.6 ± 4.18 | 108.4 ± 3.74 | n = 21 | [BCH] Beckman Coulter UniCel DxC 800 |
| 280.0 ± 13.41 | 49.7 ± 1.15 | 57.6 ± 1.53 | 82.0 ± 3.59 | 70.3 ± 2.27 | n = 11 | [JJE] Ortho Vitros 250/350/950 |
| 274.5 ± 8.20 | 50.9 ± 2.96 | 61.2 ± 2.77 | 85.1 ± 3.38 | 72.3 ± 4.48 | n = 21 | [JJF] Ortho Vitros 5,1FS |
| 273.9 ± 18.81 | 50.8 ± 0.91 | 60.4 ± 2.61 | 85.0 ± 5.34 | 72.3 ± 3.36 | n = 6 | [JJG] Ortho Vitros 5600 |
| 458.1 ± 7.17 | 60.3 ± 1.80 | 79.7 ± 1.39 | 120.3 ± 1.88 | 103.5 ± 1.39 | n = 13 | [ROC] Roche cobas c501 |
| 451.0 ± 10.55 | 60.1 ± 1.96 | 78.7 ± 1.51 | 118.3 ± 2.68 | 102.3 ± 2.12 | n = 11 | [ROT] Roche Cobas INTEGRA |
| 451.3 ± 7.08 | 60.0 ± 1.47 | 78.7 ± 1.62 | 118.6 ± 1.94 | 102.0 ± 1.76 | n = 32 | [ROD] Roche MODULAR D/P |
| 476.6 ± 9.50 | 60.7 ± 1.31 | 81.5 ± 1.65 | 123.5 ± 2.29 | 105.7 ± 2.51 | n = 15 | [BYE] Siemens ADVIA 1800 |
| 444.3 ± 3.37 | 56.2 ± 1.54 | 75.3 ± 1.37 | 114.3 ± 1.37 | 97.5 ± 2.74 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 560.2 ± 8.71 | 52.4 ± 1.15 | 79.3 ± 1.57 | 128.4 ± 1.78 | 111.4 ± 1.95 | n = 9 | [DUE] Siemens Dimension EXL |
| 561.3 ± 11.61 | 52.4 ± 1.51 | 79.2 ± 2.02 | 128.7 ± 3.17 | 111.8 ± 2.83 | n = 37 | [DUR] Siemens Dimension RxL |
| 539.1 ± 12.41 | 49.3 ± 1.26 | 74.8 ± 1.55 | 122.5 ± 2.69 | 105.7 ± 2.15 | n = 28 | [DUT] Siemens Dimension Vista |
| 564.1 ± 7.19 | 52.6 ± 0.71 | 79.2 ± 1.82 | 129.1 ± 1.96 | 111.7 ± 1.65 | n = 17 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 514.4 ± 11.97 | 58.0 ± 0.92 | 78.4 ± 1.32 | 124.3 ± 2.74 | 107.4 ± 2.47 | n = 10 | [AB1] Abbott |
| 249.6 ± 8.43 | 77.3 ± 4.06 | 79.7 ± 5.86 | 104.3 ± 4.06 | 87.5 ± 6.32 | n = 3 | [BC1] Beckman Coulter |
| 492.8 ± 12.11 | 60.9 ± 1.94 | 83.3 ± 2.18 | 125.7 ± 3.52 | 108.2 ± 2.82 | n = 48 | [BC2] Beckman Coulter IFCC Standardized |
| 415.2 ± 22.91 | 45.3 ± 2.67 | 62.9 ± 3.72 | 100.0 ± 5.17 | 86.0 ± 4.80 | n = 40 | [OL1] Beckman Coulter AU Series |
| 276.6 ± 11.57 | 50.6 ± 2.51 | 60.1 ± 3.16 | 84.3 ± 4.10 | 71.6 ± 3.85 | n = 40 | [JJ1] Ortho Clinical Diagnostics |
| 457.7 ± 6.54 | 60.2 ± 1.63 | 79.7 ± 1.33 | 120.1 ± 1.83 | 103.6 ± 1.33 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 452.0 ± 7.32 | 60.0 ± 1.43 | 78.8 ± 1.63 | 118.7 ± 1.87 | 102.2 ± 1.73 | n = 34 | [RO2] Roche Hitachi and Modular D/P |
| 451.0 ± 10.55 | 60.1 ± 1.96 | 78.7 ± 1.51 | 118.3 ± 2.68 | 102.3 ± 2.12 | n = 11 | [RO1] Roche Integra and MIRA |
| 469.1 ± 16.82 | 59.8 ± 2.28 | 80.3 ± 3.05 | 121.6 ± 4.61 | 104.0 ± 4.21 | n = 22 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 556.3 ± 15.26 | 51.6 ± 2.02 | 78.0 ± 2.88 | 127.2 ± 4.02 | 110.1 ± 3.80 | n = 90 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Alkaline Phosphatase (U/L 37°C)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 224.8 ± 27.76 | 60.0 ± 9.72 | 126.6 ± 13.11 | 271.0 ± 27.31 | 230.8 ± 21.87 | n = 359 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 191.3 ± 5.86 | 54.0 ± 6.31 | 109.7 ± 4.96 | 236.0 ± 10.00 | 202.4 ± 9.68 | n = 3 | [AXA] Abaxis Piccolo |
| 234.9 ± 4.96 | 62.3 ± 1.56 | 134.7 ± 2.90 | 286.1 ± 8.34 | 245.2 ± 6.71 | n = 13 | [ABJ] Abbott Architect c System |
| 202.2 ± 11.22 | 52.2 ± 2.55 | 116.1 ± 6.36 | 247.4 ± 13.23 | 212.8 ± 11.50 | n = 50 | [OLC] Beckman Coulter AU Chemistry System |
| 195.8 ± 7.58 | 50.4 ± 2.00 | 111.0 ± 2.98 | 237.6 ± 16.67 | 204.7 ± 5.64 | n = 9 | [BCS] Beckman Coulter CX |
| 203.3 ± 7.25 | 52.9 ± 3.06 | 115.8 ± 5.65 | 248.9 ± 9.53 | 211.8 ± 8.20 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 199.2 ± 7.68 | 51.4 ± 2.22 | 113.2 ± 2.95 | 242.3 ± 8.45 | 210.5 ± 6.58 | n = 18 | [BCG] Beckman Coulter UniCel DxC 600 |
| 205.0 ± 7.61 | 53.0 ± 2.56 | 117.2 ± 4.22 | 251.4 ± 9.38 | 216.3 ± 7.80 | n = 23 | [BCH] Beckman Coulter UniCel DxC 800 |
| 272.0 ± 16.57 | 74.1 ± 3.95 | 129.7 ± 7.58 | 289.4 ± 18.24 | 237.1 ± 15.45 | n = 13 | [JJE] Ortho Vitros 250/350/950 |
| 276.8 ± 12.30 | 76.5 ± 3.19 | 132.1 ± 5.38 | 293.2 ± 14.95 | 238.2 ± 10.80 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 274.1 ± 13.89 | 75.1 ± 3.24 | 131.0 ± 5.34 | 287.2 ± 17.38 | 230.9 ± 16.82 | n = 6 | [JJG] Ortho Vitros 5600 |
| 224.8 ± 4.87 | 59.6 ± 1.47 | 128.3 ± 2.80 | 272.4 ± 5.84 | 232.7 ± 4.65 | n = 13 | [ROC] Roche cobas c501 |
| 219.8 ± 5.67 | 56.5 ± 1.85 | 125.3 ± 2.67 | 271.6 ± 5.78 | 231.3 ± 4.78 | n = 12 | [ROT] Roche Cobas INTEGRA |
| 217.4 ± 5.49 | 58.1 ± 1.56 | 125.0 ± 3.08 | 264.4 ± 7.01 | 226.6 ± 5.71 | n = 36 | [ROD] Roche MODULAR D/P |
| 236.2 ± 8.30 | 61.1 ± 2.27 | 135.6 ± 4.26 | 290.3 ± 7.56 | 248.8 ± 6.46 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 225.6 ± 11.05 | 57.7 ± 3.07 | 130.6 ± 8.43 | 275.1 ± 14.65 | 233.3 ± 14.01 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 256.5 ± 7.43 | 74.1 ± 4.97 | 151.7 ± 7.04 | 310.9 ± 10.39 | 266.4 ± 8.06 | n = 11 | [DUE] Siemens Dimension EXL |
| 255.1 ± 12.75 | 73.0 ± 7.68 | 149.3 ± 9.33 | 310.5 ± 15.14 | 266.5 ± 14.74 | n = 37 | [DUR] Siemens Dimension RxL |
| 213.5 ± 10.49 | 56.8 ± 2.99 | 121.6 ± 6.07 | 260.8 ± 16.34 | 222.8 ± 13.10 | n = 29 | [DUT] Siemens Dimension Vista |
| 242.2 ± 6.61 | 69.1 ± 5.51 | 142.6 ± 7.96 | 298.3 ± 11.11 | 255.5 ± 8.36 | n = 19 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 191.3 ± 5.86 | 54.0 ± 6.31 | 109.7 ± 4.96 | 236.0 ± 10.00 | 202.4 ± 9.68 | n = 3 | [AX1] Abaxis |
| 234.9 ± 4.96 | 62.3 ± 1.56 | 134.7 ± 2.90 | 286.1 ± 8.34 | 245.2 ± 6.71 | n = 13 | [AB1] Abbott |
| 201.1 ± 8.22 | 52.0 ± 2.53 | 114.6 ± 4.46 | 246.0 ± 10.01 | 211.7 ± 8.34 | n = 57 | [BC1] Beckman Coulter |
| 201.9 ± 10.71 | 52.2 ± 2.48 | 115.9 ± 6.06 | 247.1 ± 12.63 | 212.5 ± 11.05 | n = 49 | [OL1] Beckman Coulter AU Series |
| 210.2 ± 19.89 | 58.2 ± 12.08 | 125.9 ± 17.54 | 238.3 ± 29.19 | 233.4 ± 37.05 | n = 4 | [CR1] Carolina |
| 209.0 ± 29.12 | 54.4 ± 10.17 | 120.2 ± 19.70 | 262.1 ± 18.64 | 226.0 ± 12.65 | n = 3 | [JA1] JAS Diagnostics |
| 274.6 ± 14.29 | 75.5 ± 3.73 | 131.1 ± 5.98 | 291.3 ± 16.05 | 237.4 ± 13.06 | n = 42 | [JJ1] Ortho Clinical Diagnostics |
| 224.8 ± 4.58 | 59.4 ± 1.65 | 128.3 ± 2.65 | 272.9 ± 5.74 | 233.1 ± 4.63 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 217.4 ± 5.49 | 58.1 ± 1.56 | 125.0 ± 3.08 | 264.4 ± 7.01 | 226.6 ± 5.71 | n = 36 | [RO2] Roche Hitachi and Modular D/P |
| 220.0 ± 5.11 | 56.7 ± 1.95 | 125.5 ± 2.77 | 271.4 ± 5.22 | 231.8 ± 2.78 | n = 13 | [RO1] Roche Integra and MIRA |
| 233.1 ± 10.08 | 60.4 ± 2.81 | 134.0 ± 5.95 | 286.5 ± 11.53 | 245.8 ± 9.38 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 241.8 ± 22.45 | 67.3 ± 9.86 | 140.6 ± 15.50 | 295.1 ± 26.57 | 253.0 ± 23.50 | n = 96 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**γ-Glutamyltransferase (U/L 37°C)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 124.1 ± 25.84 | 24.1 ± 6.44 | 45.3 ± 9.85 | 82.8 ± 19.25 | 71.4 ± 16.78 | n = 304 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 128.5 ± 5.83 | 23.9 ± 1.28 | 46.5 ± 1.80 | 83.5 ± 3.67 | 71.7 ± 3.32 | n = 13 | [ABJ] Abbott Architect c System |
| 98.0 ± 4.67 | 20.5 ± 1.31 | 36.4 ± 2.00 | 64.2 ± 3.27 | 55.5 ± 2.75 | n = 47 | [OLC] Beckman Coulter AU Chemistry System |
| 107.4 ± 23.76 | 19.2 ± 1.45 | 38.5 ± 6.94 | 70.9 ± 13.38 | 59.2 ± 8.84 | n = 7 | [BCS] Beckman Coulter CX |
| 121.5 ± 4.60 | 18.1 ± 2.21 | 40.5 ± 1.61 | 78.0 ± 2.73 | 67.3 ± 2.17 | n = 10 | [BCX] Beckman Coulter LX-20 |
| 123.2 ± 3.77 | 18.8 ± 1.04 | 42.4 ± 1.91 | 79.2 ± 2.58 | 67.8 ± 2.85 | n = 13 | [BCG] Beckman Coulter UniCel DxC 600 |
| 125.0 ± 3.77 | 18.1 ± 1.69 | 41.7 ± 1.47 | 79.6 ± 2.71 | 69.0 ± 2.18 | n = 17 | [BCH] Beckman Coulter UniCel DxC 800 |
| 196.0 ± 5.12 | 27.6 ± 2.09 | 65.6 ± 1.47 | 126.9 ± 3.57 | 109.0 ± 3.72 | n = 10 | [JJE] Ortho Vitros 250/350/950 |
| 191.8 ± 5.68 | 28.5 ± 0.92 | 65.5 ± 2.53 | 124.7 ± 3.41 | 107.4 ± 3.21 | n = 21 | [JJF] Ortho Vitros 5,1FS |
| 191.1 ± 5.62 | 29.0 ± 0.66 | 67.2 ± 3.90 | 126.9 ± 7.91 | 106.9 ± 3.23 | n = 6 | [JJG] Ortho Vitros 5600 |
| 107.7 ± 2.48 | 20.4 ± 0.64 | 39.6 ± 1.22 | 70.5 ± 1.33 | 60.7 ± 1.19 | n = 12 | [ROC] Roche cobas c501 |
| 104.9 ± 2.52 | 20.1 ± 1.13 | 38.1 ± 1.07 | 68.8 ± 1.18 | 59.4 ± 1.11 | n = 12 | [ROT] Roche Cobas INTEGRA |
| 110.3 ± 3.34 | 20.5 ± 1.15 | 40.0 ± 1.63 | 72.0 ± 2.35 | 61.6 ± 1.92 | n = 34 | [ROD] Roche MODULAR D/P |
| 118.5 ± 2.97 | 22.8 ± 1.84 | 42.6 ± 1.86 | 77.7 ± 2.48 | 66.4 ± 1.81 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 141.0 ± 0.00 | 35.5 ± 2.06 | 54.9 ± 1.61 | 98.5 ± 1.44 | 86.6 ± 1.51 | n = 10 | [DUE] Siemens Dimension EXL |
| 141.9 ± 3.45 | 34.6 ± 2.15 | 54.2 ± 2.41 | 98.6 ± 2.51 | 85.9 ± 2.51 | n = 27 | [DUR] Siemens Dimension RxL |
| 145.0 ± 3.45 | 31.6 ± 2.17 | 52.5 ± 2.31 | 98.9 ± 2.42 | 84.7 ± 1.88 | n = 28 | [DUT] Siemens Dimension Vista |
| 141.8 ± 2.08 | 35.4 ± 1.15 | 54.6 ± 1.44 | 98.9 ± 1.73 | 85.5 ± 1.86 | n = 9 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 127.9 ± 5.15 | 23.8 ± 1.14 | 46.3 ± 1.58 | 83.1 ± 3.40 | 71.4 ± 3.04 | n = 12 | [AB1] Abbott |
| 123.1 ± 4.08 | 18.5 ± 1.54 | 41.5 ± 1.78 | 78.8 ± 2.65 | 68.0 ± 2.33 | n = 43 | [BC1] Beckman Coulter |
| 98.0 ± 4.61 | 20.5 ± 1.32 | 36.4 ± 1.95 | 64.2 ± 3.19 | 55.5 ± 2.68 | n = 45 | [OL1] Beckman Coulter AU Series |
| 93.9 ± 24.97 | 21.2 ± 6.56 | 36.6 ± 9.16 | 65.0 ± 16.06 | 52.6 ± 5.46 | n = 4 | [CR1] Carolina |
| 100.1 ± 5.22 | 20.7 ± 1.37 | 37.0 ± 1.80 | 68.7 ± 0.51 | 57.2 ± 2.36 | n = 3 | [JA1] JAS Diagnostics |
| 192.9 ± 5.83 | 28.5 ± 1.28 | 65.6 ± 2.22 | 125.3 ± 3.74 | 107.7 ± 3.40 | n = 37 | [JJ1] Ortho Clinical Diagnostics |
| 107.7 ± 2.48 | 20.4 ± 0.64 | 39.6 ± 1.22 | 70.5 ± 1.33 | 60.7 ± 1.19 | n = 12 | [RO4] Roche cobas c311/c501/c502/c701 |
| 110.3 ± 3.34 | 20.5 ± 1.15 | 40.0 ± 1.63 | 72.0 ± 2.35 | 61.6 ± 1.92 | n = 34 | [RO2] Roche Hitachi and Modular D/P |
| 104.9 ± 2.52 | 20.1 ± 1.13 | 38.1 ± 1.07 | 68.8 ± 1.18 | 59.4 ± 1.11 | n = 12 | [RO1] Roche Integra and MIRA |
| 116.7 ± 4.40 | 22.5 ± 2.17 | 41.9 ± 2.20 | 76.5 ± 3.33 | 65.6 ± 2.23 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 142.9 ± 3.48 | 33.9 ± 2.69 | 53.7 ± 2.41 | 98.7 ± 2.27 | 85.6 ± 2.25 | n = 71 | [DA5] Siemens Dimension |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Creatine Kinase (U/L 37°C)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 90.3 ± 7.58 | 288.9 ± 18.10 | 59.3 ± 6.85 | 262.5 ± 19.64 | 222.6 ± 17.81 | n = 326 | [---] All Methods & Instruments |
| | | | | | | <Instruments> |
| 97.6 ± 1.23 | 305.9 ± 5.66 | 64.5 ± 1.64 | 279.9 ± 8.67 | 236.6 ± 7.53 | n = 12 | [ABJ] Abbott Architect c System |
| 79.0 ± 3.65 | 259.3 ± 11.30 | 51.2 ± 2.95 | 235.6 ± 14.13 | 201.1 ± 9.79 | n = 44 | [OLC] Beckman Coulter AU Chemistry System |
| 83.7 ± 9.63 | 273.8 ± 28.61 | 55.3 ± 9.58 | 239.4 ± 34.34 | 198.7 ± 17.91 | n = 7 | [BCS] Beckman Coulter CX |
| 95.5 ± 3.63 | 305.0 ± 7.01 | 65.4 ± 2.73 | 266.1 ± 10.57 | 230.2 ± 9.78 | n = 12 | [BCX] Beckman Coulter LX-20 |
| 93.4 ± 3.98 | 302.0 ± 8.60 | 65.3 ± 1.58 | 271.1 ± 7.36 | 230.1 ± 7.56 | n = 15 | [BCG] Beckman Coulter UniCel DxC 600 |
| 93.7 ± 2.81 | 302.5 ± 8.61 | 64.7 ± 1.97 | 265.7 ± 13.12 | 225.9 ± 10.29 | n = 22 | [BCH] Beckman Coulter UniCel DxC 800 |
| 97.5 ± 7.07 | 302.9 ± 14.33 | 58.9 ± 4.35 | 292.5 ± 20.16 | 263.0 ± 14.59 | n = 11 | [JJE] Ortho Vitros 250/350/950 |
| 98.7 ± 4.58 | 311.9 ± 16.07 | 61.3 ± 3.48 | 299.4 ± 19.70 | 269.9 ± 14.99 | n = 20 | [JJF] Ortho Vitros 5,1FS |
| 97.6 ± 3.30 | 305.5 ± 11.28 | 61.2 ± 2.77 | 291.4 ± 16.49 | 260.6 ± 15.24 | n = 6 | [JJG] Ortho Vitros 5600 |
| 87.2 ± 2.87 | 289.8 ± 7.44 | 56.6 ± 1.76 | 262.4 ± 12.65 | 223.7 ± 11.34 | n = 13 | [ROC] Roche cobas c501 |
| 78.6 ± 4.90 | 269.3 ± 6.18 | 49.4 ± 5.68 | 246.0 ± 6.48 | 208.9 ± 6.48 | n = 10 | [ROT] Roche Cobas INTEGRA |
| 90.8 ± 1.94 | 285.2 ± 4.07 | 61.4 ± 1.37 | 262.2 ± 6.08 | 222.9 ± 4.13 | n = 35 | [ROD] Roche MODULAR D/P |
| 88.5 ± 2.05 | 289.0 ± 5.40 | 52.9 ± 1.44 | 263.8 ± 9.47 | 224.6 ± 7.38 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 84.5 ± 1.86 | 273.9 ± 5.22 | 50.7 ± 1.37 | 251.3 ± 3.16 | 209.0 ± 7.21 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 92.0 ± 1.51 | 291.3 ± 5.82 | 61.5 ± 1.44 | 266.1 ± 9.51 | 222.6 ± 7.53 | n = 10 | [DUE] Siemens Dimension EXL |
| 92.4 ± 3.56 | 292.0 ± 8.82 | 61.8 ± 2.42 | 266.9 ± 10.40 | 225.1 ± 7.23 | n = 37 | [DUR] Siemens Dimension RxL |
| 90.6 ± 6.70 | 286.1 ± 12.98 | 59.4 ± 8.23 | 260.6 ± 14.90 | 222.1 ± 12.28 | n = 27 | [DUT] Siemens Dimension Vista |
| 90.4 ± 7.26 | 289.4 ± 10.24 | 59.5 ± 8.93 | 264.7 ± 15.38 | 224.6 ± 12.16 | n = 16 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 97.6 ± 1.23 | 305.9 ± 5.66 | 64.5 ± 1.64 | 279.9 ± 8.67 | 236.6 ± 7.53 | n = 12 | [AB1] Abbott |
| 93.9 ± 3.71 | 303.0 ± 8.52 | 65.0 ± 2.33 | 267.5 ± 12.14 | 228.1 ± 10.34 | n = 52 | [BC1] Beckman Coulter |
| 78.9 ± 3.54 | 258.6 ± 10.68 | 51.1 ± 2.91 | 234.6 ± 13.50 | 200.5 ± 9.20 | n = 42 | [OL1] Beckman Coulter AU Series |
| 79.3 ± 9.14 | 260.3 ± 24.74 | 49.7 ± 7.58 | 230.8 ± 36.32 | 192.3 ± 12.06 | n = 5 | [CR1] Carolina |
| 98.1 ± 5.05 | 308.0 ± 15.63 | 60.6 ± 3.67 | 296.0 ± 19.85 | 266.1 ± 15.80 | n = 37 | [JJ1] Ortho Clinical Diagnostics |
| 87.2 ± 2.73 | 289.8 ± 7.11 | 56.6 ± 1.69 | 263.0 ± 12.12 | 224.0 ± 10.86 | n = 14 | [RO4] Roche cobas c311/c501/c502/c701 |
| 90.8 ± 1.97 | 285.1 ± 4.07 | 61.4 ± 1.29 | 262.1 ± 6.20 | 223.0 ± 4.19 | n = 34 | [RO2] Roche Hitachi and Modular D/P |
| 78.6 ± 4.90 | 269.3 ± 6.18 | 49.4 ± 5.68 | 246.0 ± 6.48 | 208.9 ± 6.48 | n = 10 | [RO1] Roche Integra and MIRA |
| 87.8 ± 2.41 | 284.5 ± 9.25 | 52.7 ± 1.73 | 260.4 ± 11.35 | 220.2 ± 10.84 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 87.8 ± 8.64 | 283.9 ± 15.59 | 56.1 ± 10.65 | 257.9 ± 17.84 | 219.8 ± 14.20 | n = 41 | [DA5] Siemens Dimension |
| 92.8 ± 2.30 | 292.2 ± 5.33 | 62.0 ± 1.78 | 268.3 ± 7.83 | 226.1 ± 6.74 | n = 45 | [DA8] Siemens Dimension IFCC Standardized |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Creatine Kinase-MB (ng/mL, U/L 37°C, %)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 0.97 ± 0.37 | 42.98 ± 6.09 | 0.62 ± 0.36 | 29.87 ± 4.04 | 25.95 ± 3.65 | n = 198 | [-A-] All Methods – Results reported in ng/mL |
| 1.07 ± 0.21 | 41.35 ± 4.01 | 0.59 ± 0.14 | 28.36 ± 4.49 | 24.79 ± 4.69 | n = 19 | [AB1] Abbott |
| 2.17 ± 1.94 | 48.45 ± 2.20 | 1.79 ± 2.17 | 34.26 ± 1.57 | 29.73 ± 1.17 | n = 22 | [SAA] Beckman Coulter ACCESS |
| 1.23 ± 0.08 | 50.60 ± 2.85 | 0.65 ± 0.07 | 35.37 ± 2.01 | 30.54 ± 1.36 | n = 16 | [BC-] Beckman Coulter LX-20/DxC 600/DxI 800 |
| 0.70 ± 0.22 | 39.90 ± 2.16 | 0.25 ± 0.11 | 28.59 ± 1.55 | 25.34 ± 1.19 | n = 33 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 1.00 ± 0.00 | 28.42 ± 1.13 | 1.00 ± 0.00 | 22.55 ± 3.86 | 16.09 ± 1.41 | n = 5 | [BS1] Biosite Diagnostics |
| 0.69 ± 0.20 | 43.86 ± 3.46 | 0.47 ± 0.22 | 29.61 ± 2.12 | 25.17 ± 1.73 | n = 40 | [DA5] Siemens Dimension |
| 0.83 ± 0.13 | 37.62 ± 1.38 | 0.94 ± 0.16 | 26.61 ± 0.87 | 22.94 ± 0.75 | n = 13 | [DA6] Siemens Dimension LOCI |
| 1.50 ± 0.40 | 43.67 ± 2.01 | 0.69 ± 0.28 | 31.92 ± 2.35 | 27.78 ± 2.22 | n = 5 | [DP5] Siemens Immulite |
| 0.81 ± 0.07 | 30.68 ± 1.10 | 0.37 ± 0.06 | 23.45 ± 0.98 | 20.60 ± 0.90 | n = 15 | [JJ1] Ortho Clinical Diagnostics |
| 1.49 ± 0.11 | 45.36 ± 1.62 | 1.28 ± 0.18 | 30.93 ± 1.18 | 27.21 ± 0.98 | n = 25 | [RO3] Roche Elecsys/Modular E/e601/e411 |
| 1.00 ± 0.72 | 53.39 ± 1.53 | 0.42 ± 0.32 | 38.70 ± 1.09 | 34.77 ± 1.58 | n = 3 | [TOM] Tosoh Bioscience |
| 3.18 ± 2.28 | 46.64 ± 5.01 | 1.56 ± 1.24 | 32.60 ± 3.64 | 27.34 ± 3.38 | n = 5 | [---] All Methods – Results reported in U/L |
| 0.00 ± 0.00 | 18.15 ± 4.93 | 0.00 ± 0.00 | 12.10 ± 4.10 | 11.26 ± 3.15 | n = 4 | [-P-] All Methods – Results reported as % |

**Summary of Participant Performance (Mean and Standard Deviation)**

**Lactate Dehydrogenase (U/L 37°C)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 105.7 ± 10.83 | 234.8 ± 25.08 | 89.5 ± 8.97 | 260.6 ± 27.47 | 222.3 ± 23.26 | n = 269 | [-A-] All Methods - Lactate to Pyruvate |
| 333.6 ± 21.17 | 645.0 ± 13.60 | 263.1 ± 17.42 | 738.8 ± 14.54 | 622.4 ± 15.59 | n = 40 | [-B-] All Methods - Pyruvate to Lactate |
| | | | | | | <Instruments> |
| 115.0 ± 6.41 | 233.0 ± 10.56 | 93.1 ± 5.04 | 260.5 ± 13.42 | 220.3 ± 10.40 | n = 12 | [ABJ] Abbott Architect c System |
| 98.5 ± 4.40 | 218.2 ± 9.23 | 83.1 ± 4.20 | 241.7 ± 9.86 | 206.0 ± 8.96 | n = 45 | [OLC] Beckman Coulter AU Chemistry System |
| 92.7 ± 5.05 | 203.2 ± 8.53 | 81.1 ± 5.73 | 225.6 ± 11.22 | 193.1 ± 9.25 | n = 7 | [BCS] Beckman Coulter CX |
| 95.4 ± 3.58 | 211.0 ± 6.86 | 80.9 ± 4.25 | 234.8 ± 6.93 | 199.4 ± 6.91 | n = 11 | [BCX] Beckman Coulter LX-20 |
| 93.0 ± 3.47 | 206.3 ± 6.77 | 79.9 ± 3.52 | 228.3 ± 8.06 | 195.9 ± 8.13 | n = 16 | [BCG] Beckman Coulter UniCel DxC 600 |
| 94.5 ± 2.54 | 210.2 ± 3.72 | 80.9 ± 2.91 | 232.5 ± 5.06 | 199.3 ± 3.94 | n = 20 | [BCH] Beckman Coulter UniCel DxC 800 |
| 349.4 ± 21.23 | 645.3 ± 14.04 | 267.9 ± 11.45 | 742.8 ± 14.34 | 629.0 ± 12.67 | n = 11 | [JJE] Ortho Vitros 250/350/950 |
| 323.8 ± 16.34 | 645.5 ± 16.45 | 256.9 ± 21.32 | 738.8 ± 16.60 | 619.7 ± 19.42 | n = 22 | [JJF] Ortho Vitros 5,1FS |
| 329.4 ± 12.77 | 641.5 ± 12.92 | 267.3 ± 12.49 | 730.1 ± 12.66 | 612.9 ± 12.47 | n = 6 | [JJG] Ortho Vitros 5600 |
| 112.3 ± 1.43 | 251.4 ± 5.21 | 96.0 ± 3.05 | 280.8 ± 6.40 | 238.4 ± 6.78 | n = 13 | [ROC] Roche cobas c501 |
| 112.9 ± 3.31 | 250.8 ± 4.84 | 94.5 ± 3.18 | 276.8 ± 6.46 | 238.3 ± 5.02 | n = 10 | [ROT] Roche Cobas INTEGRA |
| 111.8 ± 3.77 | 250.8 ± 6.75 | 94.7 ± 3.52 | 277.4 ± 7.40 | 237.3 ± 6.67 | n = 33 | [ROD] Roche MODULAR D/P |
| 114.5 ± 3.05 | 253.9 ± 6.81 | 97.6 ± 2.81 | 280.6 ± 7.56 | 240.0 ± 6.95 | n = 16 | [BYE] Siemens ADVIA 1800 |
| 107.7 ± 1.37 | 237.4 ± 1.02 | 91.0 ± 0.90 | 263.8 ± 2.36 | 220.9 ± 8.31 | n = 3 | [BYB] Siemens ADVIA 2400 |
| 113.0 ± 3.82 | 258.1 ± 8.48 | 93.9 ± 4.35 | 284.5 ± 9.10 | 242.5 ± 8.63 | n = 9 | [DUE] Siemens Dimension EXL |
| 106.0 ± 12.01 | 242.3 ± 31.65 | 90.6 ± 10.47 | 267.4 ± 33.65 | 229.6 ± 28.06 | n = 29 | [DUR] Siemens Dimension RxL |
| 110.2 ± 9.67 | 249.0 ± 23.83 | 94.0 ± 8.37 | 275.0 ± 25.18 | 235.1 ± 19.86 | n = 29 | [DUT] Siemens Dimension Vista |
| 108.4 ± 11.62 | 243.3 ± 25.25 | 92.1 ± 8.37 | 272.5 ± 27.57 | 231.7 ± 21.41 | n = 12 | [DUX] Siemens Dimension Xpand |
| | | | | | | <Reagents> |
| 115.0 ± 6.41 | 233.0 ± 10.56 | 93.1 ± 5.04 | 260.5 ± 13.42 | 220.3 ± 10.40 | n = 12 | [AB1] Abbott |
| 93.9 ± 3.36 | 208.6 ± 6.04 | 80.3 ± 3.50 | 231.3 ± 7.10 | 197.6 ± 6.58 | n = 50 | [BC1] Beckman Coulter |
| 98.3 ± 4.28 | 217.8 ± 8.97 | 83.0 ± 4.14 | 241.4 ± 9.49 | 205.7 ± 8.63 | n = 44 | [OL1] Beckman Coulter AU Series |
| 95.2 ± 5.39 | 204.3 ± 10.86 | 85.0 ± 6.01 | 241.9 ± 29.85 | 197.5 ± 11.44 | n = 4 | [CR1] Carolina |
| 99.2 ± 8.77 | 216.8 ± 13.16 | 78.7 ± 8.57 | 240.0 ± 12.65 | 212.3 ± 8.64 | n = 3 | [JA1] JAS Diagnostics |
| 331.6 ± 21.24 | 644.8 ± 15.09 | 262.2 ± 18.14 | 738.2 ± 16.08 | 621.6 ± 17.50 | n = 39 | [JJ1] Ortho Clinical Diagnostics |
| 112.3 ± 1.43 | 251.4 ± 5.21 | 96.0 ± 3.05 | 280.8 ± 6.40 | 238.4 ± 6.78 | n = 13 | [RO4] Roche cobas c311/c501/c502/c701 |
| 111.8 ± 3.70 | 250.7 ± 6.62 | 94.7 ± 3.45 | 277.2 ± 7.28 | 237.3 ± 6.52 | n = 34 | [RO2] Roche Hitachi and Modular D/P |
| 112.9 ± 3.31 | 250.8 ± 4.84 | 94.5 ± 3.18 | 276.8 ± 6.46 | 238.3 ± 5.02 | n = 10 | [RO1] Roche Integra and MIRA |
| 112.8 ± 4.04 | 250.2 ± 8.98 | 96.2 ± 3.67 | 277.0 ± 9.43 | 236.9 ± 9.07 | n = 23 | [BY1] Siemens ADVIA/ADVIA Centaur |
| 101.8 ± 11.50 | 227.4 ± 25.99 | 86.8 ± 9.04 | 253.0 ± 28.83 | 217.7 ± 23.83 | n = 37 | [DA5] Siemens Dimension |
| 114.0 ± 4.07 | 260.8 ± 8.73 | 96.9 ± 4.96 | 287.8 ± 9.28 | 245.4 ± 8.07 | n = 39 | [DA8] Siemens Dimension IFCC Standardized |

**Summary of Participant Performance (Mean and Standard Deviation)**

**LDH Isoenzyme 1 (%)**

| Specimen: C56 | Specimen: C57 | Specimen: C58 | Specimen: C59 | Specimen: C60 | Number | [Code] Instrument or Reagent System |
|---|---|---|---|---|---|---|
| 31.8 ± 2.88 | 37.0 ± 2.40 | 33.3 ± 3.16 | 38.8 ± 1.76 | 38.3 ± 1.54 | n = 8 | [-P-] All Methods – Results reported as % |
| | | | | | | <Instruments> |
| 33.5 ± 1.22 | 38.0 ± 1.50 | 35.2 ± 0.41 | 39.5 ± 0.57 | 38.7 ± 0.82 | n = 4 | [HLS] Helena SPIFE |
| 29.5 ± 2.85 | 35.7 ± 2.65 | 30.4 ± 2.91 | 37.5 ± 2.32 | 37.8 ± 2.11 | n = 4 | [SEE] Sebia Electrophoresis |
| | | | | | | <Reagents> |
| 33.5 ± 1.22 | 38.0 ± 1.50 | 35.2 ± 0.41 | 39.5 ± 0.57 | 38.7 ± 0.82 | n = 4 | [HL1] Helena Laboratories |
| 29.5 ± 2.85 | 35.7 ± 2.65 | 30.4 ± 2.91 | 37.5 ± 2.32 | 37.8 ± 2.11 | n = 4 | [SE1] Sebia |