Supplemental Table S1: Reagents, calibrators and controls used on the Atellica COAG 360. Shown are reference ranges and onboard reagents stabilities according to the manufacturer for parameters used in the current study (all Siemens Healthineers). Gender-specific reference ranges are provided for protein S (free). The 90th percentile cutoff concentration is indicated for D-dimer.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Reagents** | **Controls** | **Calibrators** | **Reference ranges** | **Onboard reagents stabilities (days)** | **Methodology** |
| PT | Innovin | Ci-Trol 2  Control N | PT Multi Calibrator | 7.3 – 9.1 s | 10 | Coagulation |
| INR | Innovin | Ci-Trol 2  Control N | PT Multi Calibrator | - | 10 | Coagulation |
| aPTT | Actin FS | Ci-Trol 2  Control N | - | 23.2 – 30.4 s | 14 | Coagulation |
| Fibrinogen | Fibrinogen Dade Thrombin | Control N/P | Standard Human Plasma | 1.88 – 3.84 g/l | 7 | Coagulation |
| Antithrombin | Innovance Antithrombin | Control N/P | Standard Human Plasma | 82.7 – 115.3 % | 9 | Chromogenic |
| D-dimer | Innovance  D-dimer | D-Dimer Control 1/2 | Innovance  D-Dimer Calibrator | Cutoff: 0.50 µg/ml FEU | 14 | Immuno-turbidimetry |
| FII/V/VII/X | FII/V/VII/X deficient plasma Innovin | Control N/P | Standard Human Plasma | FII: 77.0 – 126.3 %  FV: 66.6 – 148.6 %  FVII: 56.4 – 156.7 %  FX: 65.5 – 135.2 % | FII: 24 h  FV: 24 h  FVII: 24 h  FX: 14 h | Coagulation |
| FVIII/IX/ XI/XII | FVIII/IX/XI/XII deficient plasma Actin FS | Control N/P | Standard Human Plasma | FVIII: 79.5 – 216.3 %  FIX: 78.2 – 150.3 %  FXI: 82.8 – 154.2 %  FXII: 52.9 – >150.0 % | FVIII: 24 h FIX: 24 h  FXI: 24 h  FXII: 24 h | Coagulation |
| FVIII chromogenic | FVIII chromogenic | Control N/P | Standard Human Plasma | 87.1 – 211.7 % | 2 | Chromogenic |
| FXIII | Berichrom FXIII | Control N/P | Standard Human Plasma | 85.8 – >150.0 % | 5 | Chromogenic |
| Protein C | Berichrom  Protein C | Control N/P | Standard Human Plasma | 75.8 – 141.8 % | 14 | Chromogenic |
| Protein S (free) | Innovance Free PS Ag | Control N/P | Standard Human Plasma | m: 74.2 – 136.2 %  w: 57.0 – 126.4 % | 14 | Immuno-turbidimetry |
| vWF Ag/Ac | vWF reagent/  Innovance vWF Ac | Control N/P | Standard Human Plasma | vWF Ag: 60.2 – 191.8 %  vWF Ac: 49.0 – 199.8 % | vWF Ag: 14  vWF Ac: 12 | Immuno-turbidimetry |

PT: prothrombin time; INR: international normalized ratio; aPTT: activated partial thromboplastin time; FEU: fibrinogen equivalent unit; FII: factor II; FV: factor V; FVII factor VII; FVIII: factor VIII; FIX: factor IX; FX: factor X; FXI: factor XI; FXII: factor FXII; FXIII: factor XIII; vWF Ag: von-Willebrand factor antigen; vWF Ac: von-Willebrand activity.

Table S2: Intra- and inter-assay precision of coagulation parameters determined by the Sysmex CS-5100. Two commercially available control samples with different target values were used and mean ± standard deviation (SD) and the corresponding coefficients of variation (CV) were calculated.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Intra-assay precision (n=10)** | | | | **Inter-assay precision (n=20)** | | | |
| **Target value** | **Mean** | **SD** | **CV** | **Target value** | **Mean** | **SD** | **CV** |
| **INR** | 1.04 | 1.06 | 0.01 | 0.7% | 1.04 | 1.07 | 0.01 | 1.1% |
| 2.92 | 2.91 | 0.05 | 1.7% | 2.92 | 2.98 | 0.05 | 1.8% |
| **aPTT [s]** | 24.0 | 24.12 | 0.26 | 1.1% | 24.0 | 24.14 | 0.24 | 1.0% |
| 43.1 | 44.53 | 0.26 | 0.6% | 43.1 | 44.32 | 0.46 | 1.0% |
| **Fibrinogen [g/dl]** | 0.91 | 0.91 | 0.07 | 7.4% | 0.91 | 0.87 | 0.06 | 6.7% |
| 2.49 | 2.48 | 0.17 | 7.1% | 2.49 | 2.46 | 0.11 | 4.5% |
| **Antithrombin [%]** | 32.0 | 29.98 | 0.92 | 3.1% | 32.0 | 28.80 | 2.69 | 3.1% |
| 99.0 | 96.44 | 1.93 | 2.0% | 99.0 | 92.87 | 2.84 | 3.1% |
| **D-Dimers [µg/ml FEU]** | 0.3 | 0.30 | 0.02 | 5.8% | 0.3 | 0.31 | 0.02 | 6.2% |
| 2.73 | 2.58 | 0.17 | 6.6% | 2.73 | 2.63 | 0.14 | 5.3% |
| **F XIII [%]** | 27.0 | 26.74 | 1.70 | 6.3% | 27.0 | 27.00 | 1.61 | 6.0% |
| 87.0 | 95.94 | 2.65 | 2.8% | 87.0 | 91.43 | 5.82 | 6.4% |

INR: international normalized ratio; aPTT: activated partial thromboplastin time; FEU: fibrinogen equivalent unit; FXIII: factor XIII