

**Supplementary material**

**Table 1.** Assay precision of Sysmex XN-1000

Haematologic parameters	Intra-run CV (%)		Inter-run CV (%)		Manufacturer CV (%)
	QC Level 1	QC Level 3	QC Level 1	QC Level 3	
Hb (g/L)	0.96	0.37	0.93	0.88	< 1.0
Hct (L/L)	0.32	0.55	1.44	1.04	< 1.5
RBC (x10 <sup>12</sup> /L)	0.48	0.45	1.09	1.42	< 1.5
RDW (%)	0.49	0.37	1.40	1.45	< 2.0
Pit (x10 <sup>9</sup> /L)	2.66	2.22	3.68	2.21	< 4.0
MPV (fL)	1.96	0.61	1.86	0.98	< 4.0
WBC (x10 <sup>9</sup> /L)	1.57	2.25	1.92	2.16	< 3.0
Lymphocytes (%)	0.32	3.09	4.54	2.25	< 8.0
Monocytes (%)	11.97	2.95	8.06	3.68	< 20.0
Neutrophils (%)	5.25	1.28	2.85	2.11	< 8.0

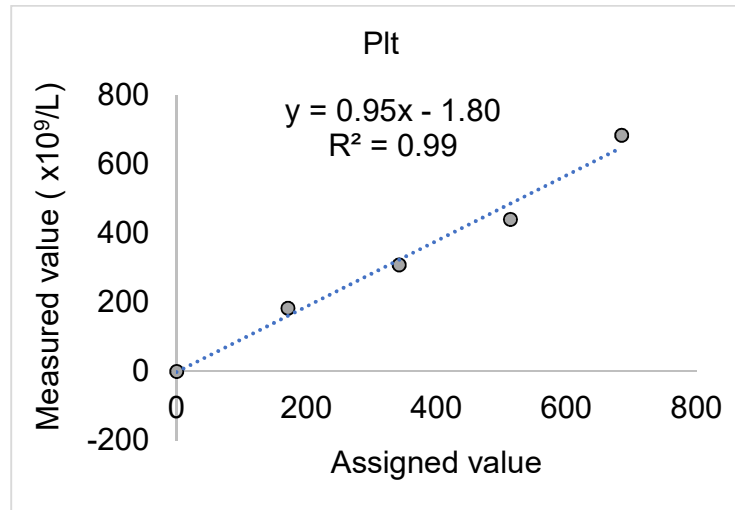
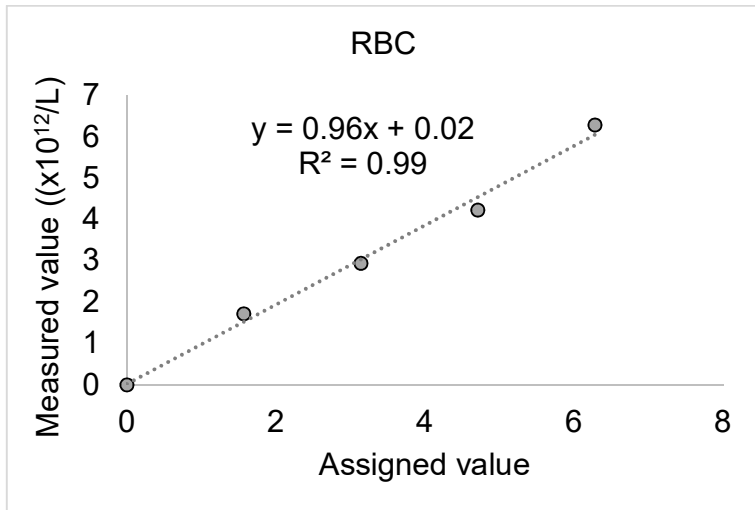
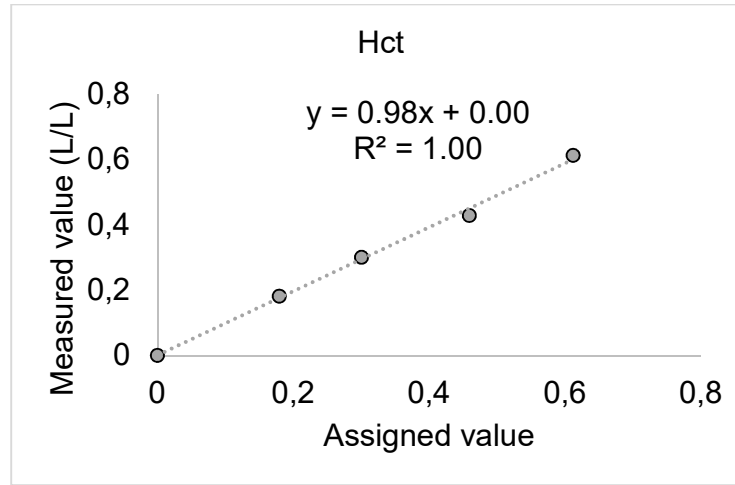
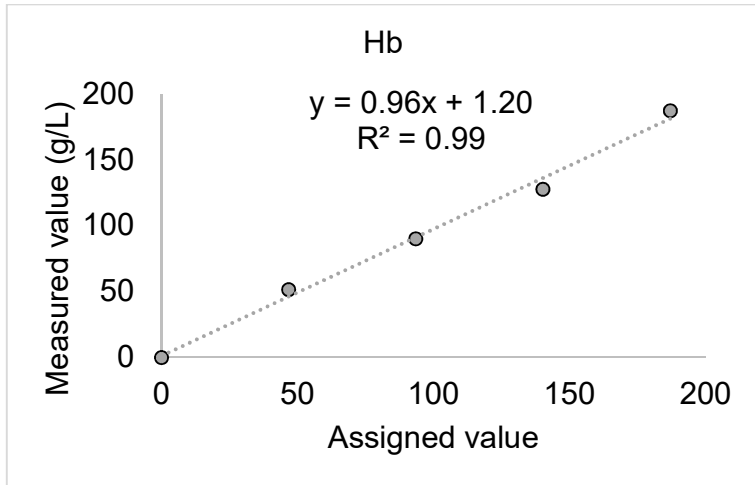
<b>Eosinophils (%)</b>	8.45	8.18	6.94	6.62	< 25.0
<b>Basophils (%)</b>	3.27	2.41	2.82	2.01	< 25.0
<b>NRBC (%)</b>	1.87	5.63	7.29	3.22	< 25.0
<b>IG (%)</b>	6.10	2.67	3.43	2.42	< 25.0
<b>Lymphocytes (x10<sup>9</sup>/L)</b>	1.20	3.09	5.75	2.78	< 8.0
<b>Monocytes (x10<sup>9</sup>/L)</b>	10.13	2.95	6.96	3.52	< 20.0
<b>Neutrophils (x10<sup>9</sup>/L)</b>	4.56	1.58	3.14	2.29	< 8.0
<b>Eosinophils (x10<sup>9</sup>/L)</b>	9.64	8.18	6.96	7.02	< 25.0
<b>Basophiles (x10<sup>9</sup>/L)</b>	3.93	2.41	3.11	2.61	< 40.0
<b>NRBC (x10<sup>9</sup>/L)</b>	2.98	4.47	7.59	3.23	< 25.0
<b>IG (x10<sup>9</sup>/L)</b>	6.24	2.24	4.33	2.56	< 25.0

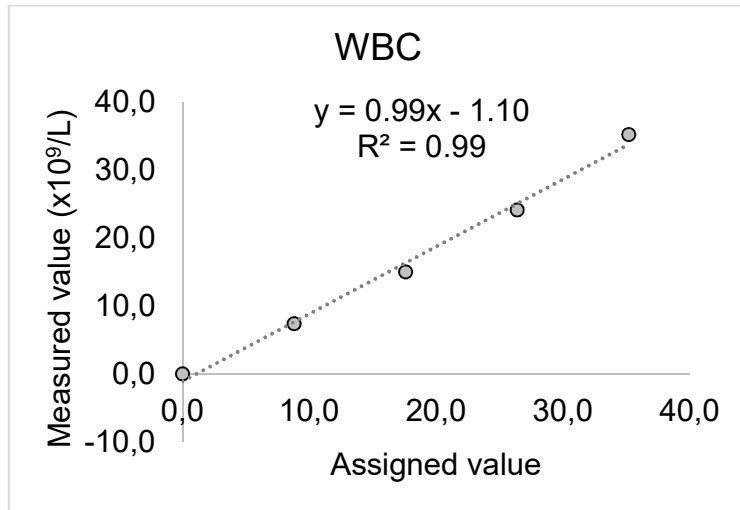
The control measurements were carried out in triplicate for five days. CV - coefficient of variation. QC - quality control. Hb – haemoglobin. Hct – haematocrit. RBC - red blood cell. RDW - red blood cell distribution width. Plt – platelets. MPV - mean platelet volume. WBC - white blood cell. NRBC - nucleated red blood cell. IG - immature granulocytes.

**Table 2.** Assay trueness of Sysmex XN-1000

Haematologic parameters	Reference material 1				Reference material 2				Error allowed (%)
	Value obtained	Value assigned	Bias %	Total error %	Value obtained	Value assigned	Bias %	Total error %	
Hb (g/L)	56.2	58.7	- 4.26	4.77	169.9	164.3	3.40	3.77	5.00
Hct (L/L)	0.171	0.167	2.15	2.75	0.491	0.474	3.49	3.71	4.40
RBC (x10 <sup>12</sup> /L)	2.15	2.23	- 3.59	4.06	4.97	5.10	- 2.37	2.58	4.50
Plt (x10 <sup>9</sup> /L)	51.00	47.75	6.81	9.10	512.6	467.48	9.65	10.47	11.40
WBC (x10 <sup>9</sup> /L)	3.35	3.50	- 4.14	5.16	17.41	17.33	0.49	0.99	11.70

The trueness assay was carried out with the External Quality Assessment Programme with 307 participating laboratories (JAR Quality, SA de CV). Hb – haemoglobin. Hct – haematocrit. RBC - red blood cell. Plt – platelets. WBC - white blood cell.





**Figure 1.** Assay linearity for Hb, Hct, RBC, WBC and Plt in Sysmex XN-1000. The linearity test was carried out with different dilutions made from samples with high concentration of each analyte, measured in triplicate. Hb – haemoglobin. Hct – haematocrit. RBC - red blood cell. Plt – platelets. WBC - white blood cell.

**Table 3.** Assay Carryover of Sysmex XN-1000

Haematologic parameters	QC Level low Measure			QC level high Measure			Carryover %	Carryover % allowed (Manufacturer)
	1	2	3	1	2	3		
<b>Hb (g/L)</b>	59	58	59	152	153	153	0	<1%
<b>Hct (L/L)</b>	0.178	0.177	0.177	0.432	0.451	0.445	0.37	<1%
<b>RBC (x10<sup>12</sup>/L)</b>	2.42	2.41	2.41	4.93	5.0	5.05	0.37	<1%
<b>Plt (x10<sup>9</sup>/L)</b>	93	94	92	603	600	603	0.20	<1%
<b>WBC (x10<sup>9</sup>/L)</b>	3.2	3.1	3.1	16.6	16.7	16.7	0.73	<1%

This test was performed, obtaining 3 consecutive measures of QC high level, followed by 3 measures of QC level low. The following formula was applied: Carryover= (Measure 1 QC low – Measure 3 QC low)/(Measure 3 QC high – Measure 3 QC low) x 100. QC – Quality control. Hb – haemoglobin. Hct – haematocrit. RBC - red blood cell. Plt – platelets. WBC - white blood cell.