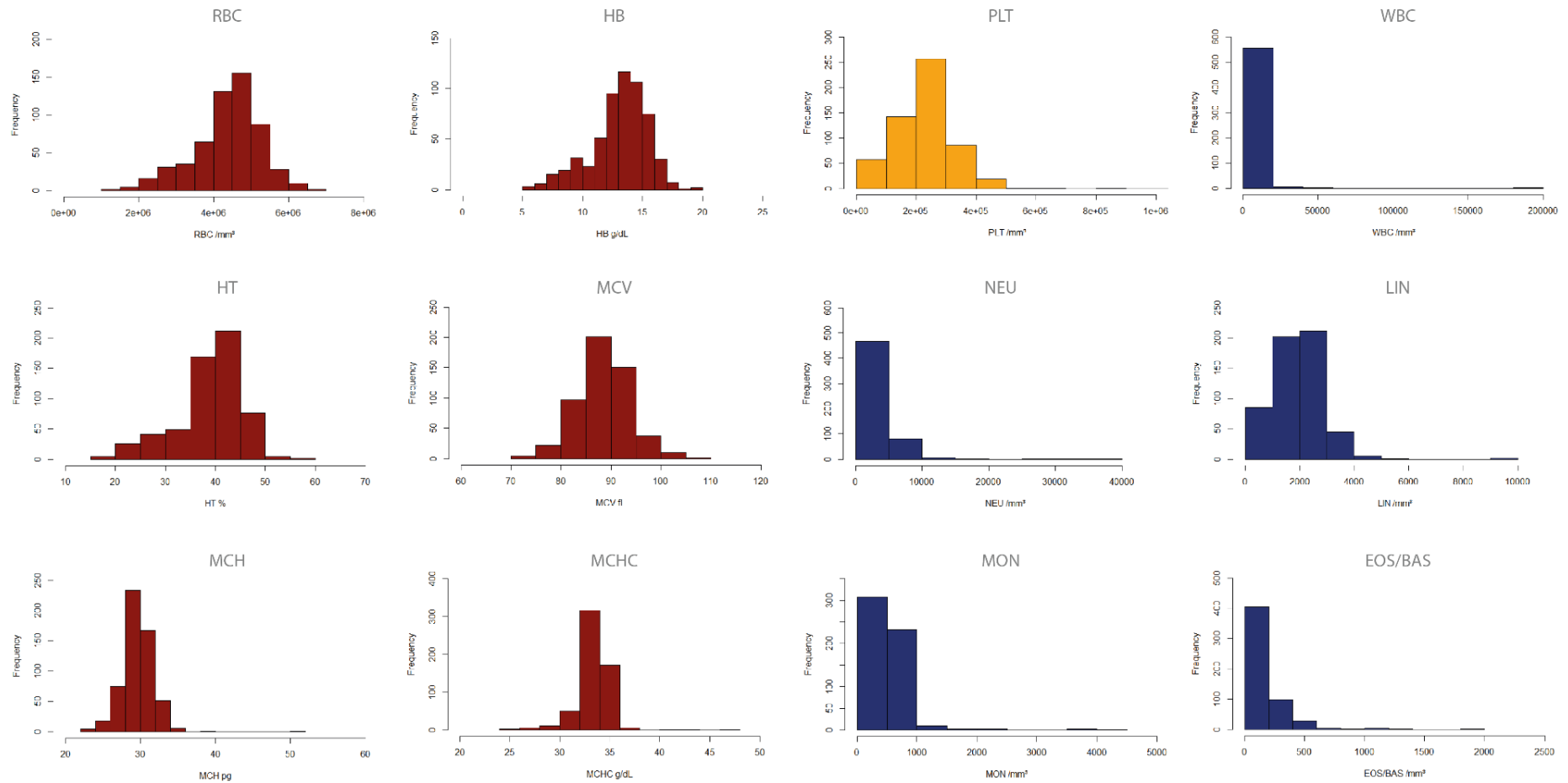


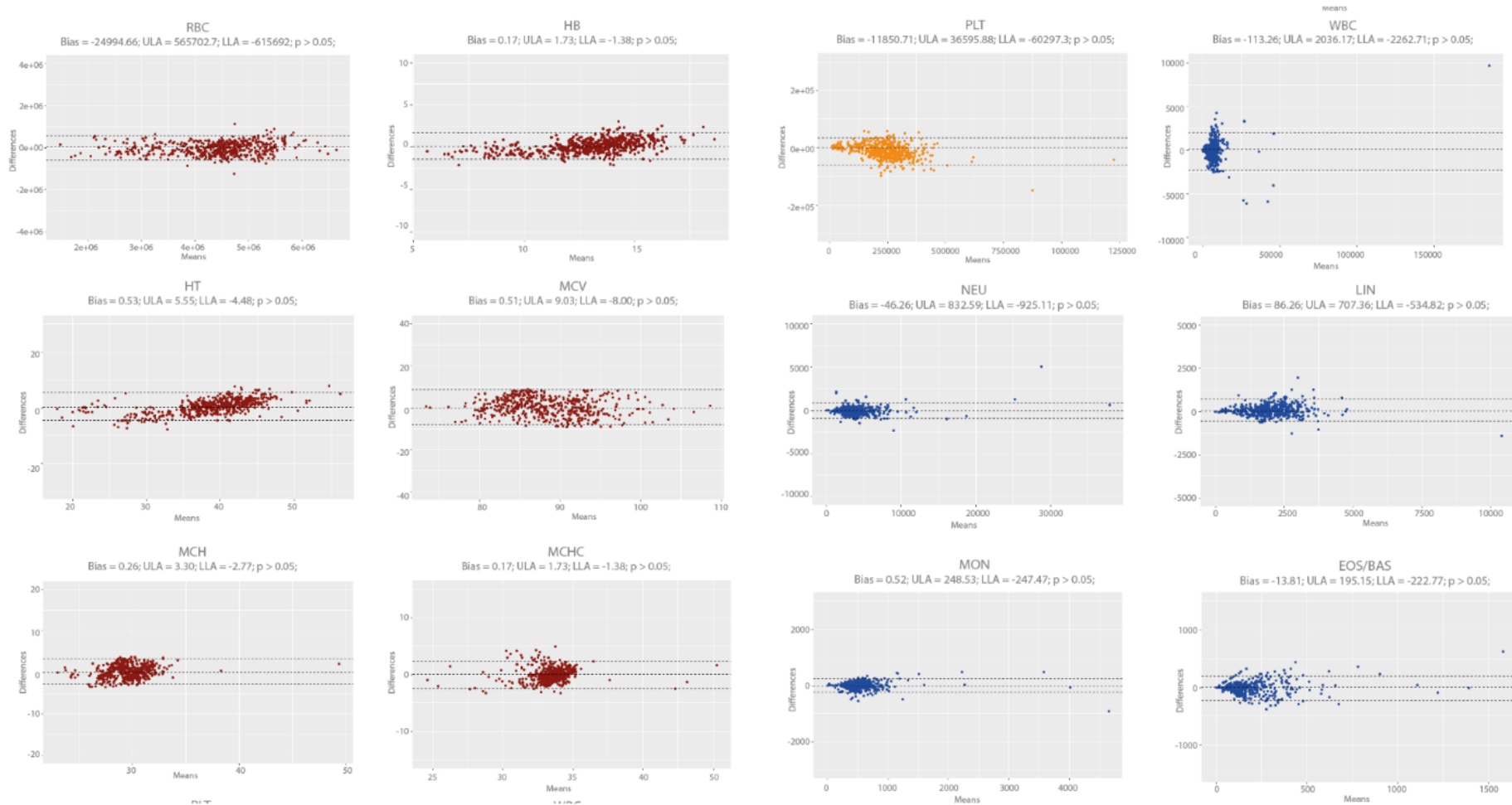
**Supplementary Figure S1 - Histogram plot of the frequency distributions of all CBC analytes, evaluated in the method comparison study (n = 550 patients/group). Red graphs represent the analytes related to red blood cells (RBC, HB, HT, MCV, MCH, MCHC), yellow graphs to platelets (PLT), and blue graphs to white blood cells (WBC, NEU, LIN, MON, EOS/BAS).**



**Table S1 - Descriptive statistics for method comparison study.**

<b>CBC Analytes</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Median</b>	<b>Standard Deviation</b>	<b>Reference values<sup>12</sup></b>
RBC	1.4x10 <sup>6</sup> /mm <sup>3</sup>	6.7x10 <sup>6</sup> /mm <sup>3</sup>	4.4x10 <sup>6</sup> /mm <sup>3</sup>	4.5x10 <sup>6</sup> /mm <sup>3</sup>	827.5 x10 <sup>3</sup> /mm <sup>3</sup>	3.8 - 5.5x10 <sup>6</sup> /mm <sup>3</sup>
HB	5.4 g/dL	19.3 g/dL	12.93 g/dL	13.21 g/dL	2.34 g/dL	12.0 - 17.0 g/dL
HT	16.8%	58.8%	38.53%	40.10%	6.56%	36.0 - 50.0%
MCV	54.5 fL	109.2 fL	88.08 fL	88.27 fL	5.95 fL	83.0 - 101.0 fL
MCH	23.6 pg	38.5 pg	29.42 pg	29.8 pg	2.15 pg	27.0 - 32.0 pg
MCHC	24.13 g/dL	46.10 g/dL	33.45 g/dL	33.68 g/dL	1.67 g/dL	31.0 - 36.0 g/dL
PLT	900 /mm <sup>3</sup>	124x10 <sup>4</sup> /mm <sup>3</sup>	241 x10 <sup>3</sup> /mm <sup>3</sup>	245 x10 <sup>3</sup> /mm <sup>3</sup>	112.6 x10 <sup>3</sup> /mm <sup>3</sup>	150 - 410x10 <sup>3</sup> /mm <sup>3</sup>
WBC	70/mm <sup>3</sup>	180x10 <sup>3</sup> /mm <sup>3</sup>	6.8x10 <sup>3</sup> /mm <sup>3</sup>	6.1x10 <sup>3</sup> /mm <sup>3</sup>	8.8x10 <sup>3</sup> /mm <sup>3</sup>	4 - 10x10 <sup>3</sup> /mm <sup>3</sup>
NEU	167/mm <sup>3</sup>	159x10 <sup>3</sup> /mm <sup>3</sup>	3.7x10 <sup>3</sup> /mm <sup>3</sup>	3.4x10 <sup>3</sup> /mm <sup>3</sup>	2.9x10 <sup>3</sup> /mm <sup>3</sup>	2 - 7x10 <sup>3</sup> /mm <sup>3</sup>
MON	33/mm <sup>3</sup>	5100/mm <sup>3</sup>	0.5x10 <sup>3</sup> /mm <sup>3</sup>	0.47x10 <sup>3</sup> /mm <sup>3</sup>	0.3x10 <sup>3</sup> /mm <sup>3</sup>	0.2 - 1x10 <sup>3</sup> /mm <sup>3</sup>
LIN	100/mm <sup>3</sup>	17360/mm <sup>3</sup>	1.8x10 <sup>3</sup> /mm <sup>3</sup>	1.8x10 <sup>3</sup> /mm <sup>3</sup>	1.1x10 <sup>3</sup> /mm <sup>3</sup>	1 - 3x10 <sup>3</sup> /mm <sup>3</sup>
EOS/BAS	0/mm <sup>3</sup>	1800/mm <sup>3</sup>	0.16x10 <sup>3</sup> /mm <sup>3</sup>	0.14x10 <sup>3</sup> /mm <sup>3</sup>	0.18x10 <sup>3</sup> /mm <sup>3</sup>	0.04 - 0.6x10 <sup>3</sup> /mm <sup>3</sup>

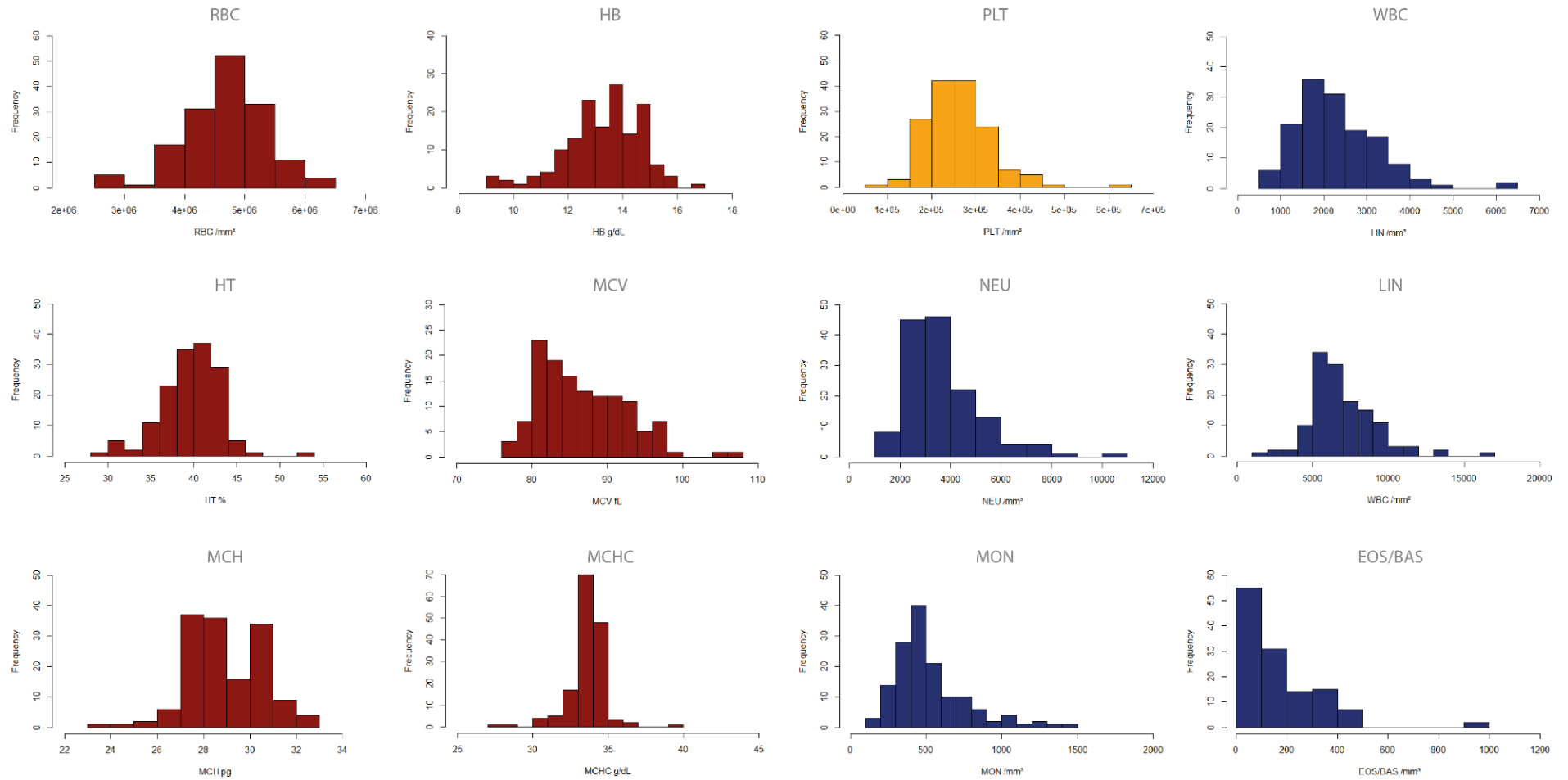
**Supplementary Figure S2 - Bland–Altman plot of the method comparison study between the Hilab System and the Sysmex XE-2100.** Bias, Student T-test p-value, upper limit of agreement (ULA), and lower limit of agreement (LLA) are demonstrated for each analyte.



**Table S2 - Descriptive statistics for the equivalence study between venous and capillary blood samples.**

<b>CBC Analytes</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Median</b>	<b>Standard Deviation</b>	<b>Reference values</b>
RBC	2.6x10 <sup>6</sup> /mm <sup>3</sup>	6.2x10 <sup>6</sup> /mm <sup>3</sup>	4.68x10 <sup>6</sup> /mm <sup>3</sup>	4.71x10 <sup>6</sup> /mm <sup>3</sup>	656x10 <sup>3</sup> /mm <sup>3</sup>	3.8 - 5.5x10 <sup>6</sup> /mm <sup>3</sup>
HB	7.0 g/dL	17.43 g/dL	13.6 g/dL	13.8 g/dL	1.4 g/dL	12.0 - 17.0 g/dL
HT	28.86%	50.09%	39.6%	39.78%	3.49%	36.0 - 50.0%
MCV	67.92 fL	122.96 fL	86.77 fL	85.8 fL	5.83 fL	83.0 - 101.0 fL
MCH	21.21 pg	38.77 pg	29.56 pg	30.0 pg	1.62 pg	27.0 - 32.0 pg
MCHC	34.13 g/dL	39.10 g/dL	33.74 g/dL	33.99 g/dL	1.2 g/dL	31.0 - 36.0 g/dL
PLT	84x10 <sup>3</sup> /mm <sup>3</sup>	604x10 <sup>3</sup> /mm <sup>3</sup>	256x10 <sup>3</sup> /mm <sup>3</sup>	248x10 <sup>3</sup> /mm <sup>3</sup>	729x10 <sup>3</sup> /mm <sup>3</sup>	150 - 410x10 <sup>3</sup> /mm <sup>3</sup>
WBC	1.7x10 <sup>3</sup> /mm <sup>3</sup>	16.1x10 <sup>3</sup> /mm <sup>3</sup>	6.9x10 <sup>3</sup> /mm <sup>3</sup>	6.6x10 <sup>3</sup> /mm <sup>3</sup>	2.1x10 <sup>3</sup> /mm <sup>3</sup>	4 - 10x10 <sup>3</sup> /mm <sup>3</sup>
NEU	1.5x10 <sup>3</sup> /mm <sup>3</sup>	10.9x10 <sup>3</sup> /mm <sup>3</sup>	3.8x10 <sup>3</sup> /mm <sup>3</sup>	3.5x10 <sup>3</sup> /mm <sup>3</sup>	1.4x10 <sup>3</sup> /mm <sup>3</sup>	2 - 7x10 <sup>3</sup> /mm <sup>3</sup>
MON	0.1x10 <sup>3</sup> /mm <sup>3</sup>	1.9x10 <sup>3</sup> /mm <sup>3</sup>	0.53x10 <sup>3</sup> /mm <sup>3</sup>	0.47x10 <sup>3</sup> /mm <sup>3</sup>	0.2x10 <sup>3</sup> /mm <sup>3</sup>	0.2 - 1x10 <sup>3</sup> /mm <sup>3</sup>
LIN	0.5x10 <sup>3</sup> /mm <sup>3</sup>	6.3x10 <sup>3</sup> /mm <sup>3</sup>	2.2x10 <sup>3</sup> /mm <sup>3</sup>	2.1x10 <sup>3</sup> /mm <sup>3</sup>	0.9x10 <sup>3</sup> /mm <sup>3</sup>	1 - 3x10 <sup>3</sup> /mm <sup>3</sup>
EOS/BAS	0.03x10 <sup>3</sup> /mm <sup>3</sup>	1.1x10 <sup>3</sup> /mm <sup>3</sup>	0.19x10 <sup>3</sup> /mm <sup>3</sup>	0.13x10 <sup>3</sup> /mm <sup>3</sup>	0.16x10 <sup>3</sup> /mm <sup>3</sup>	0.04 - 0.6x10 <sup>3</sup> /mm <sup>3</sup>

**Supplementary Figure S3 - Histogram plot of the frequency distributions of all CBC analytes, evaluated in the equivalence study between venous and capillary blood samples (n = 150 patients/group). Red graphs represent the analytes related to red blood cells (RBC, HB, HT, MCV, MCH, MCHC), yellow graphs to platelets (PLT), and blue graphs to white blood cells (WBC, NEU, LIN, MON, EOS/BAS).**



**Supplementary Figure S4 - Graphical illustration of the Hilab Lens machine learning model, based on continually refining and updating processes.**

