

**Uncertainties of quantitative measurements for the tests carried out at the laboratory. TOS**

Tests	Units of measurement	2013			2014			2015			2016			2017			Target CV	Admissible total CV
		Low numbers	Average numbers	High numbers	Low numbers	Average numbers	High numbers	Low numbers	Average numbers	High numbers	Low numbers	Average numbers	High numbers	Low numbers	Average numbers	High numbers		
		CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%	CV%		
ALAT	U/L		4.5	2.3		4.0	2.5		4.2	2.9		3.8	2.5		3.4	2.4	3.9	<b>32.1</b>
ASAT	U/L		2.4	1.7		3.0	1.9		3.1	1.8		2.9	1.8		3.2	1.7	3.9	<b>15.2</b>
KFK	U/L		1.9	1.5		1.8	1.2		1.9	1.2		1.8	1.3		2.1	1.4	3.5	<b>30.3</b>
KFK MB group	U/L		11.0	2.9			3.9		7.5	5.8		11.7	6.1		10.4	7.7	3.4	<b>31.2</b>
LDH	U/L		2.4	1.6		3.4	2.3		3.6	2.5		3.5	2.7				4.3	<b>11.4</b>
Alkaline phosphate	U/L		9.7	7.8		10.5	7.4		6.0	4.4		4.6	2.2		4.2	2.6	7.1	<b>11.7</b>
Alpha amylase	U/L		2.4	1.3		1.9	1.0		1.4	1.1		1.3	1.3		1.4	1.1	3.7	<b>14.6</b>
Creatinine	μmol/l		5.5	2.7		4.7	2.5		5.2	3.3		5.2	3.0		4.0	2.8	3.0	<b>8.2</b>
Ethanol	g/l		8.7	6.9		7.8	5.9		7.2	4.7		5.6	4.3		5.9	4.2	5.4	<b>4.8</b>
Albumin	g/l		1.9	1.3		2.3	1.7		1.7	1.0		1.7	1.0		1.6	1.0	2.3	<b>3.9</b>
Protein in urine	mg/dl		5.2	3.2		4.9	3.5		2.6	1.3		3.5	1.6		2.6	1.9	7.4	<b>40.0</b>
Micro albumin	mg/l											5.3	2.6		5.8	2.8	10.2	<b>46.0</b>
Urea	mmol/l		3.1	2.7		3.0	2.8		3.2	2.7		2.7	2.0		2.9	2.3	4.8	<b>15.7</b>
Glucose	mmol/l		1.5	1.3		1.8	1.4		1.6	1.2		1.4	1.3		1.5	1.2	1.6	<b>6.9</b>
Bilirubin total	μmol/l		4.0	1.3		3.9	1.6		3.0	1.1		2.8	1.3		3.8	1.3	2.7	<b>31.1</b>
Protein total	g/l		1.0	0.9		1.1	0.9		1.3	1.0		1.1	1.0		1.4	1.1	2.2	<b>3.4</b>
Uric acid	μmol/l		2.0	1.7		2.2	1.9		1.8	1.5		2.1	1.6		2.6	1.7	4.1	<b>8.0</b>
Phosphorus	mmol/l		3.0	1.7		2.8	1.6		3.7	1.5		3.5	1.6		-	-	3.5	<b>7.8</b>
Calcium	mmol/l		1.5	1.4		1.8	1.5		2.3	2.0		2.2	1.7		2.0	1.5	1.9	<b>2.4</b>
CRO	mg/dl		4.0	2.3		3.2	2.2		3.8	1.7		5.4	2.1		4.9	1.6	4.3	<b>56.6</b>
Cholesterol	mmol/l		2.9	2.4		2.3	1.7		2.3	1.4		2.0	1.4		1.8	1.2	1.8	<b>8.5</b>
Magnesium	mmol/l		4.6	2.7		4.5	2.9		5.8	3.0		6.1	2.8		4.9	2.4	4.9	<b>4.8</b>
Sodium	mmol/l		1.3	1.0		1.1	0.8		0.7	0.6		0.8	0.7		0.7	0.7	1.5	<b>0.9</b>
Potassium	mmol/l		1.6	1.3		1.4	1.0		0.7	0.6		1.0	0.7		1.1	0.9	1.3	<b>5.8</b>
Chlorine	mmol/l		1.3	1.0		1.3	0.9		1.2	0.7		0.9	0.7		1.1	0.8	1.4	<b>1.5</b>
Erythrocytes	x10 <sup>12</sup> /l	1.42	1.25	1.49	1.41	1.47	1.21	0.85	0.75	0.79	0.8	0.8	0.9	1.1	0.80	1.0	1.5	<b>4.4</b>
Haemoglobin	g/l	1.13	1.07	1.02	1.06	1.13	0.75	0.75	0.60	0.63	0.8	0.7	0.7	0.8	0.7	0.7	1.0	<b>4.1</b>
Haematocrit	%	1.43	1.35	1.36	1.15	1.34	1.03	1.1	0.97	0.90	1.0	1.0	0.9	1.2	1.0	1.1	1.5	<b>4.1</b>
Arg.Er volume (MCV)	fl	0.85	0.86	0.88	0.77	0.96	0.61	0.60	0.52	0.49	0.6	0.5	0.5	0.6	0.6	0.6	1.0	<b>2.3</b>

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Avg.Hb conc.Er (MCH)	pg	1.30	1.35	1.20	1.19	1.36	0.89	1.1	0.88	0.91	1.2	1.1	0.9	1.2	0.9	1.1	2.0	<b>2.7</b>
Avg.Hb conc. (MCHC)	g/l	1.35	1.30	1.26	1.07	1.34	0.9	1.1	1.0	1.0	1.2	1.1	1.0	1.4	1.2	1.2	2.0	<b>2.2</b>
Thrombocytes	x10 <sup>9</sup> /l	3.17	5.47	3.17	2.7	6.32	1.66	5.7	2.8	1.4	5.8	2.0	2.1	8.4	2.9	1.6	6.0	<b>13.4</b>
Leukocytes	x10 <sup>9</sup> /l	2.39	2.51	2.12	1.97	2.50	1.47	1.85	1.42	1.0	2.0	1.4	1.2	2.7	2.4	2.1	3.0	<b>14.6</b>
Neutrophilic abs.	x10 <sup>9</sup> /l										3.4	2.8	2.3	4.2	3.6	3.3	8.0	<b>22.4</b>
Lymphocytes abs.	x10 <sup>9</sup> /l										4.5	3.6	4.5	6.4	4.8	5.2	8.0	<b>16.0</b>
Monocytes abs.	x10 <sup>9</sup> /l										8.5	8.9	9.3	11.6	8.1	9.5	20.0	<b>27.9</b>
Eosinophilic abs.	x10 <sup>9</sup> /l										7.6	7.6	7.5	9.1	8.8	8.1	25	<b>37.1</b>
Basophilic abs.	x10 <sup>9</sup> /l										4.2	2.8	5.5	4.7	3.5	3.5	40	<b>38.5</b>
Prothrombin	%		3.6	4.1		4.1	4.6		5.1	4.2		3.9	4.7		3.5	3.5	3.5	<b>5.3</b>
APTL	sec		2.7	2.7		3.0	3.4		2.4	3.6		2.8	3.2		2.5	2.8	2.8	<b>4.5</b>
Fibrinogen	g/l		4.9	-		5.5	-		4.4	-		5.5	-		5.4	-	5.9	<b>13.6</b>
D-dimers	ng/ml		7.7	4.8		5.5	3.8		7.1	6.3		8.3	7.2		7.0	5.9	7.9	<b>15</b>

\*\*Permissible uncertainties are indicated in the international inter-laboratory comparative testing programmes: Lab quality (Finland), UK NEQAS (Britain), CLIA (US) requirements for analytical quality.