

## EQA round: IFT1/24 - Immunophenotypisation

Deadline: 22.4.2024

Setup: groups - R (manufacturer of kit); Slovakia; minimal size of the groups n = 5

RoM = robust average	AV = assigned value	D <sub>max</sub> = acceptable difference
SD = standard deviation	CVP = consensus of all participants	LL = lower limit
CV = coefficient of variation	U <sub>AV</sub> = expanded uncertainty of the assigned value (k = 2)	UL = upper limit
N <sub>tot</sub> = total number of the results		N <sub>eva</sub> = number of the results assessed
N <sub>out</sub> = number of the results removed before calculation		N <sub>suc</sub> = number of successful results
		S <sub>rel</sub> = relative success

Test Sample Group	[unit]	RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	Comparability					N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub> [%]	
							AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL				
<b>(253) T lymphocytes (CD3+)</b>	[%]				32							32	32	100	
<b>Sample A</b>		69,8	1,2	1,7	32		CVP	70,2	0,31	7%	65,2	75,2	32	32	100
(12) Beckman Coulter		70	0,92	1,3	19	0							19		
(88) Becton Dickinson		69,2	2,7	4	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>Sample B</b>		71	1,5	2,1	32		CVP	71,5	0,39	7%	66,4	76,6	32	32	100
(12) Beckman Coulter		71	1,2	1,7	19	0							19		
(88) Becton Dickinson		71,4	2,6	3,6	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>(254) Th lymphocytes (CD4+)</b>	[%]				32							32	31	97	
<b>Sample A</b>		43,7	0,93	2,1	32		CVP	44,1	0,26	10%	39,6	48,6	32	31	97
(12) Beckman Coulter		43,9	0,72	1,7	19	0							19		
(88) Becton Dickinson		42,3	3	7,2	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>Sample B</b>		44,8	1,3	2,9	32		CVP	44,9	0,33	10%	40,4	49,4	32	32	100
(12) Beckman Coulter		44,7	1,2	2,7	19	0							19		
(88) Becton Dickinson		44,4	1,9	4,3	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>(255) T lymphocytes (CD8+)</b>	[%]				32							32	32	100	
<b>Sample A</b>		23	1,1	5	32		CVP	23,3	0,25	17%	19,3	27,3	32	32	100
(12) Beckman Coulter		22,8	1,3	5,8	19	0							19		
(88) Becton Dickinson		23,2	1,1	4,5	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>Sample B</b>		22,7	1,2	5,3	32		CVP	23	0,25	17%	19	27	32	32	100
(12) Beckman Coulter		22,6	1,2	5,4	19	0							19		
(88) Becton Dickinson		23,3	1,9	8	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>(256) B lymphocytes</b>	[%]				32							32	32	100	
<b>Sample A</b>		12,6	0,65	5,1	32		CVP	12,7	0,15	30%	8,89	16,6	32	32	100
(12) Beckman Coulter		12,5	0,7	5,6	19	0							19		
(88) Becton Dickinson		12,6	0,59	4,7	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>Sample B</b>		9,67	0,71	7,3	32		CVP	9,8	0,15	30%	6,86	12,8	32	32	100
(12) Beckman Coulter		9,61	0,72	7,5	19	0							19		
(88) Becton Dickinson		9,48	0,63	6,7	7	0							7		
Other					6	0							6		
							3x 36, 2x 177, 1x 999								
<b>(257) NK cells</b>	[%]				32							32	31	97	
<b>Sample A</b>		16,3	0,93	5,7	32		CVP	15,9	0,25	26%	11,7	20,1	32	31	97
(12) Beckman Coulter		16,2	1,1	6,7	19	0							19		
(88) Becton Dickinson		17,1	1,5	8,7	8	0							8		
Other					5	0							5		
							3x 36, 1x 177, 1x 999								
<b>Sample B</b>		17,5	1,1	6,1	32		CVP	17,2	0,28	26%	12,7	21,7	32	32	100
(12) Beckman Coulter		17,4	1,2	7,1	19	0							19		
(88) Becton Dickinson		17,4	1,1	6,2	8	0							8		
Other					5	0							5		
							3x 36, 1x 177, 1x 999								
<b>(630) WBC</b>	[·10 <sup>9</sup> /L]				24							24	19	79	
<b>Sample A</b>		2,76	0,31	11	24		CVP	2,92	0,07	16%	2,45	3,39	24	20	83
(63) Sysmex		2,98	0,34	11	9	0							9		
(177) Mindray		2,53	0,42	16	8	0							8		
Other					7	0							7		
							2x 0, 2x 12, 2x 176, 1x 179								
<b>Sample B</b>		2,99	0,16	5,5	24		CVP	3	0,039	10%	2,7	3,3	24	23	96
(63) Sysmex		3,07	0,2	6,5	9	0							9		
(177) Mindray		3,04	0,23	7,6	8	0							8		

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Test Sample Group	[unit]	RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	Comparability					N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub> [%]	
							AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL				
Other					7	0	2x 0, 2x 12, 2x 176, 1x 179					7			
<b>(631) Lymphocytes</b>	[·10 <sup>9</sup> /L]				24							24	23	96	
<b>Sample A</b>		1,21	0,19	16	24		CVP	1,31	0,062	32%	0,89	1,73	24	23	96
(63) Sysmex		1,32	0,21	16	9	0							9		
(177) Mindray		1,1	0,22	20	8	0							8		
Other					7	1							7		
							2x 0, 1x 12, 1x 36, 2x 176, 1x 179								
<b>Sample B</b>		0,773	0,12	16	24		CVP	0,805	0,042	36%	0,515	1,1	24	23	96
(63) Sysmex		0,875	0,11	13	9	0							9		
(177) Mindray		0,68	0,089	13	8	0							8		
Other					7	1							7		
							2x 0, 1x 12, 1x 36, 2x 176, 1x 179								
<b>(632) T lymphocytes (CD3+) (abs. count)</b>	[·10 <sup>9</sup> /L]				23							23	23	100	
<b>Sample A</b>		0,84	0,14	17	23		CVP	0,924	0,045	32%	0,628	1,22	23	23	100
(12) Beckman Coulter		0,92	0,13	14	10	0							10		
Other					13	0							13		
							2x 0, 2x 36, 1x 58, 2x 63, 1x 88, 4x 177, 1x 999								
<b>Sample B</b>		0,554	0,093	17	23		CVP	0,576	0,03	36%	0,368	0,784	23	23	100
(12) Beckman Coulter		0,586	0,1	17	10	0							10		
Other					13	0							13		
							2x 0, 2x 36, 1x 58, 2x 63, 1x 88, 4x 177, 1x 999								
<b>(633) Th lymphocytes (CD4+) (abs. count)</b>	[·10 <sup>9</sup> /L]				23							23	22	96	
<b>Sample A</b>		0,526	0,093	18	23		CVP	0,581	0,029	34%	0,383	0,779	23	22	96
(12) Beckman Coulter		0,579	0,088	15	10	0							10		
Other					13	0							13		
							2x 0, 2x 36, 1x 58, 2x 63, 1x 88, 4x 177, 1x 999								
<b>Sample B</b>		0,351	0,063	18	23		CVP	0,363	0,02	36%	0,232	0,494	23	23	100
(12) Beckman Coulter		0,368	0,066	18	10	0							10		
Other					13	0							13		
							2x 0, 2x 36, 1x 58, 2x 63, 1x 88, 4x 177, 1x 999								
<b>(634) T lymphocytes (CD8+) (abs. count)</b>	[·10 <sup>9</sup> /L]				23							23	22	96	
<b>Sample A</b>		0,277	0,046	17	23		CVP	0,306	0,015	32%	0,208	0,404	23	22	96
(12) Beckman Coulter		0,306	0,044	14	11	0							11		
Other					12	0							12		
							2x 0, 2x 36, 2x 63, 1x 88, 4x 177, 1x 999								
<b>Sample B</b>		0,171	0,028	16	23		CVP	0,184	0,01	36%	0,117	0,251	23	23	100
(12) Beckman Coulter		0,184	0,033	18	11	0							11		
Other					12	0							12		
							2x 0, 2x 36, 2x 63, 1x 88, 4x 177, 1x 999								
<b>(635) B lymphocytes (abs. count)</b>	[·10 <sup>9</sup> /L]				23							23	23	100	
<b>Sample A</b>		0,151	0,028	18	23		CVP	0,167	0,009	36%	0,106	0,228	23	23	100
(12) Beckman Coulter		0,168	0,027	16	11	0							11		
Other					12	0							12		
							2x 0, 2x 36, 2x 63, 1x 88, 4x 177, 1x 999								
<b>Sample B</b>		0,074	0,014	19	23		CVP	0,079	0,005	44%	0,044	0,114	23	23	100
(12) Beckman Coulter		0,079	0,019	24	11	0							11		
Other					12	0							12		
							2x 0, 2x 36, 2x 63, 1x 88, 4x 177, 1x 999								
<b>(636) NK cells (abs. count)</b>	[·10 <sup>9</sup> /L]				23							23	21	91	
<b>Sample A</b>		0,193	0,025	13	23		CVP	0,209	0,009	30%	0,146	0,272	23	21	91
(12) Beckman Coulter		0,22	0,044	20	10	0							10		
Other					13	0							13		
							2x 0, 1x 9, 2x 36, 2x 63, 1x 88, 4x 177, 1x 999								
<b>Sample B</b>		0,131	0,016	12	23		CVP	0,137	0,007	34%	0,09	0,184	23	22	96
(12) Beckman Coulter		0,14	0,023	17	10	0							10		
Other					13	0							13		
							2x 0, 1x 9, 2x 36, 2x 63, 1x 88, 4x 177, 1x 999								