

## EQA round: IFT1/23 - Immunophenotypisation

Deadline: 1.5.2023

Setup: groups - 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) CD 3+ T lymphocytes</b>	[%]				30							30	27	90	
<b>Sample A</b>		68	2	2,9	30		CVP	68,1	0,43	7%	63,3	72,9	30	28	93
(12) Beckman Coulter		67,6	1,7	2,5	17	0							17		
(88) Becton Dickinson		67,7	2,2	3,3	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>Sample B</b>		85,2	2,3	2,7	30		CVP	85,7	0,46	7%	79,7	91,7	30	29	97
(12) Beckman Coulter		84,4	2,2	2,6	17	0							17		
(88) Becton Dickinson		86,2	1,9	2,2	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>(254) CD 4+ T lymphocytes</b>	[%]				30							30	26	87	
<b>Sample A</b>		44,6	1,7	3,9	30		CVP	44,8	0,37	10%	40,3	49,3	30	29	97
(12) Beckman Coulter		44,6	1,8	4	17	0							17		
(88) Becton Dickinson		43,3	2,1	4,8	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>Sample B</b>		34,3	1,8	5,3	30		CVP	34,7	0,4	10%	31,2	38,2	30	26	87
(12) Beckman Coulter		34,3	1,4	3,9	17	0							17		
(88) Becton Dickinson		31,7	4,2	13	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>(255) CD 8+ T lymphocytes</b>	[%]				30							30	29	97	
<b>Sample A</b>		20,1	1,3	6,6	30		CVP	20,4	0,25	17%	16,9	23,9	30	30	100
(12) Beckman Coulter		19,9	1,7	8,4	17	0							17		
(88) Becton Dickinson		20,1	0,44	2,2	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>Sample B</b>		46	3,6	7,7	30		CVP	46,8	0,58	17%	38,8	54,8	30	29	97
(12) Beckman Coulter		44,8	3,9	8,7	17	0							17		
(88) Becton Dickinson		47,6	2,4	5,1	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>(256) B lymphocytes</b>	[%]				30							30	26	87	
<b>Sample A</b>		16,1	1,3	7,8	30		CVP	16,2	0,27	30%	11,3	21,1	30	30	100
(12) Beckman Coulter		16,1	1,1	6,7	17	0							17		
(88) Becton Dickinson		16,9	1,3	7,5	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>Sample B</b>		2,6	0,78	30	30		CVP	2,71	0,14	42%	1,57	3,85	30	26	87
(12) Beckman Coulter		2,77	0,74	27	17	0							17		
(88) Becton Dickinson		2,8	0,89	32	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>(257) NK cells</b>	[%]				30							30	22	73	
<b>Sample A</b>		13,8	2	14	30		CVP	13,9	0,39	26%	10,2	17,6	30	27	90
(12) Beckman Coulter		14,3	1,8	12	17	0							17		
(88) Becton Dickinson		13	2,8	22	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>Sample B</b>		9,66	2	21	30		CVP	9,32	0,38	26%	6,89	11,8	30	22	73
(12) Beckman Coulter		10,2	1,6	16	17	0							17		
(88) Becton Dickinson		9,28	3,8	41	6	0							6		
Other					7	0							7		
							3x 36, 1x 64, 2x 177, 1x 999								
<b>(630) WBC</b>	[·10 <sup>9</sup> /L]				15							15	12	80	
<b>Sample A</b>		2,04	0,17	8,1	15		CVP	2,06	0,038	11%	1,83	2,29	15	12	80
(177) Mindray		2,12	0,089	4,2	5	0							5		
Other					10	0							10		
							4x 0, 1x 12, 4x 63, 1x 179								
<b>Sample B</b>		2,26	0,16	7,2	15		CVP	2,31	0,041	11%	2,05	2,57	15	13	87
(177) Mindray		2,31	0,052	2,3	5	0							5		
Other					10	0							10		
							4x 0, 1x 12, 4x 63, 1x 179								

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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				
<b>(631) Lymphocytes</b>	[·10 <sup>9</sup> /L]				15							15	10	67	
<b>Sample A</b>		0,653	0,22	34	15		CVP	0,755	0,056	50%	0,377	1,14	15	10	67
(0) not specified		0,53	0,24	45	5	0							5		
(177) Mindray		0,666	0,11	17	5	1							5		
Other					5	1							5		
							1x 12, 3x 63, 1x 179								
<b>Sample B</b>		0,675	0,18	27	15		CVP	0,762	0,058	50%	0,381	1,15	15	12	80
(0) not specified		0,535	0,14	26	5	0							5		
(177) Mindray		0,685	0,13	18	5	1							5		
Other					5	1							5		
							1x 12, 3x 63, 1x 179								
<b>(632) CD 3+ T lymphocytes (abs. count)</b>	[·10 <sup>9</sup> /L]				15							15	9	60	
<b>Sample A</b>		0,415	0,17	40	15		CVP	0,507	0,04	50%	0,253	0,761	15	9	60
(0) not specified		0,399	0,22	56	6	1							6		
(12) Beckman Coulter		0,415	0,094	23	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>Sample B</b>		0,542	0,16	30	15		CVP	0,649	0,049	50%	0,324	0,974	15	11	73
(0) not specified		0,512	0,21	40	6	1							6		
(12) Beckman Coulter		0,553	0,099	18	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>(633) CD 4+ T lymphocytes (abs. count)</b>	[·10 <sup>9</sup> /L]				15							15	9	60	
<b>Sample A</b>		0,27	0,11	41	15		CVP	0,335	0,027	50%	0,167	0,503	15	9	60
(0) not specified		0,267	0,15	57	6	1							6		
(12) Beckman Coulter		0,275	0,062	22	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>Sample B</b>		0,223	0,072	32	15		CVP	0,265	0,022	50%	0,132	0,398	15	11	73
(0) not specified		0,214	0,098	46	6	1							6		
(12) Beckman Coulter		0,219	0,04	18	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>(634) CD 8+ T lymphocytes (abs. count)</b>	[·10 <sup>9</sup> /L]				15							15	9	60	
<b>Sample A</b>		0,122	0,051	42	15		CVP	0,15	0,012	50%	0,075	0,225	15	9	60
(0) not specified		0,117	0,064	55	6	1							6		
(12) Beckman Coulter		0,121	0,027	22	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>Sample B</b>		0,295	0,082	28	15		CVP	0,354	0,028	50%	0,177	0,531	15	11	73
(0) not specified		0,287	0,11	38	6	1							6		
(12) Beckman Coulter		0,308	0,056	18	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>(635) B lymphocytes (abs. count)</b>	[·10 <sup>9</sup> /L]				15							15	10	67	
<b>Sample A</b>		0,1	0,043	43	15		CVP	0,12	0,01	50%	0,06	0,18	15	10	67
(0) not specified		0,101	0,059	58	6	1							6		
(12) Beckman Coulter		0,104	0,016	15	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>Sample B</b>		0,017	0,007	40	15		CVP	0,02	0,003	80%	0,004	0,036	15	11	73
(0) not specified		0,061	0,073	120	6	0							6		
(12) Beckman Coulter		0,019	0,002	12	5	0							5		
Other					4	1							4		
							1x 63, 3x 177								
<b>(636) NK cells (abs. count)</b>	[·10 <sup>9</sup> /L]				15							15	11	73	
<b>Sample A</b>		0,081	0,035	44	15		CVP	0,1	0,011	60%	0,04	0,16	15	11	73
(0) not specified		0,088	0,048	55	6	1							6		
Other					9	1							9		
							1x 9, 4x 12, 1x 63, 3x 177								
<b>Sample B</b>		0,056	0,023	42	15		CVP	0,069	0,008	60%	0,027	0,111	15	11	73
(0) not specified		0,058	0,018	31	6	1							6		
Other					9	1							9		
							1x 9, 4x 12, 1x 63, 3x 177								