

EQA round: RET1/24 - Reticulocytes

Deadline: 19.4.2024

Setup: groups - S (measuring system); minimal size of the groups n = 5

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

Test Sample Group	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability					N _{eva}	N _{suc}	S _{rel} [%]	
							AV	U _{AV}	D _{max}	LL	UL				
(120) Reticulocyte count (analyser)	[·10 ⁹ /L]				192							192	171	89	
Sample A		58	11	19	192		CVP	58	1,9	40%	34,8	81,2	192	179	93
(737) Siemens Advia 120, 2120, 2120i		67,7	12	18	10	0							10		
(765) Abbott CELL-DYN Ruby		39,5	5,2	13	5	0							5		
(771) MINDRAY BC 6xxx series		52,2	5,8	11	38	0							38		
(772) Sysmex XN series		63,7	5,6	8,8	110	0							110		
(773) Beckman Coulter DxH 600/800/900, HMX series, LH series		39,6	7,4	19	20	0							20		
Other					9	0							9		
								3x 749, 4x 763, 2x 999							
Sample B		55,4	9,9	18	192		CVP	55,4	1,8	40%	33,2	77,6	192	176	92
(737) Siemens Advia 120, 2120, 2120i		71,4	14	20	10	0							10		
(765) Abbott CELL-DYN Ruby		37,5	0,74	2	5	0							5		
(771) MINDRAY BC 6xxx series		60	9	15	38	0							38		
(772) Sysmex XN series		57,2	5,1	8,9	110	0							110		
(773) Beckman Coulter DxH 600/800/900, HMX series, LH series		39	8,6	22	20	1							20		
Other					9	0							9		
								3x 749, 4x 763, 2x 999							
(138) Reticulocyte count (microscope)	[·10 ⁹ /L]				53							53	46	87	
Sample A		57,5	12	21	53	0	CVP	57,5	4	45%	31,6	83,4	53	51	96
(0) not specified													53		
Sample B		50,5	14	28	53	0	CVP	50,5	4,7	45%	27,7	73,3	53	47	89
(0) not specified													53		
(126) Immature reticulocyte fraction	[%]				115								110	104	95
Sample A		7,65	1,8	23	115								110	105	95
(12) Beckman Coulter; (773) Beckman Coulter DxH 600/800/900, HMX series, LH series		28,5	5,2	18	8	1	CVPG	28,5	5	45%	15,6	41,4	8		
(63) Sysmex; (772) Sysmex XN series		7,36	1,4	19	81	0	CVPG	7,36	0,39	45%	4,04	10,7	81		
(177) Mindray; (771) MINDRAY BC 6xxx series		8,43	2	23	21	2	CVPG	8,43	1,1	45%	4,63	12,3	21		
Other					5	0							0		
								2x 1/763, 1x 176/771, 1x 179/737, 1x 179/772							
Sample B		6,64	1,5	22	115								110	106	96
(12) Beckman Coulter; (773) Beckman Coulter DxH 600/800/900, HMX series, LH series		27,4	3,5	13	8	1	CVPG	27,4	3,4	45%	15	39,8	8		
(63) Sysmex; (772) Sysmex XN series		6,59	1,2	18	81	0	CVPG	6,59	0,32	45%	3,62	9,56	81		
(177) Mindray; (771) MINDRAY BC 6xxx series		6,03	1,5	26	21	0	CVPG	6,03	0,83	45%	3,31	8,75	21		
Other					5	0							0		
								2x 1/763, 1x 176/771, 1x 179/737, 1x 179/772							
(128) Mean amount of hemoglobin in reticulocytes	[pg]				115								112	108	96
Sample A		33,4	1,5	4,6	115								112	109	97
(63) Sysmex; (772) Sysmex XN series		33,9	0,83	2,5	86	0	CVPG	33,9	0,22	10%	30,5	37,3	86		
(177) Mindray; (771) MINDRAY BC 6xxx series		28,6	2,1	7,4	20	0	CVPG	28,6	1,2	10%	25,7	31,5	20		
(179) Siemens; (737) Siemens Advia 120, 2120, 2120i		32,2	0,74	2,3	5	0	CVPG	32,2	1	10%	28,9	35,5	5		
Other					4	0							1		
								2x 1/763, 1x 176/771, 1x 179/772							
Sample B		32,1	1,6	5	115								112	108	96
(63) Sysmex; (772) Sysmex XN series		32,7	0,83	2,5	86	0	CVPG	32,7	0,22	10%	29,4	36	86		
(177) Mindray; (771) MINDRAY BC 6xxx series		26,8	1,8	6,6	20	0	CVPG	26,8	0,97	10%	24,1	29,5	20		
(179) Siemens; (737) Siemens Advia 120, 2120, 2120i		31,1	0,67	2,1	5	0	CVPG	31,1	1	10%	27,9	34,3	5		
Other					4	0							1		
								2x 1/763, 1x 176/771, 1x 179/772							
(127) Mean reticulocyte volume	[fL]				21								21	17	81
Sample A		102	6,9	6,7	21		CVP	102	3,7	10%	91,8	113	21	18	86
(771) MINDRAY BC 6xxx series		103	10	10	10	0							10		
(773) Beckman Coulter DxH 600/800/900, HMX series, LH series		102	1,1	1,1	9	0							9		
Other					2	0							2		
								1x 737, 1x 772							

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							AV	U _{AV}	D _{max}	LL	UL				
Sample B		93,8	5,8	6,2	21		CVP	93,8	3,1	10%	84,4	104	21	18	86
(771) MINDRAY BC 6xxx series		95,7	7,9	8,2	10	0							10		
(773) Beckman Coulter DxH 600/800/900, HMX series, LH series		91,5	4,2	4,5	9	0							9		
Other					2	0							2		
							1x 737, 1x 772								