Summary statistics - quantitative results

EQA round: KO8/26 - Blood Count

Deadline: 23.10.2026

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

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

Test / Sample / Group	[unit]	RoM	SD	CV [%]	N_{tot}	N_{out}	Comparability	AV	U_{AV}	D_{max}	LL	UL	N_{eva}	N_{suc}	S_{rel} [%]
(150) **WBC**	[$\cdot 10^9$/L]				179								179	171	96
Sample A		6,68	0,35	5,2	179		CVP	6,68	0,064	15%	5,67	7,69	179	171	96
(702) Abbott CELL-DYN Emerald		5,65	0,82	14	7	0							7		
(741) Nihon Kohden Celltac Alfa		6,07	0,45	7,5	13	0							13		
(755) Sysmex KX, XP, XQ series		6,3	0,15	2,4	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		6,2	0,44	7,2	6	0							6		
(768) MINDRAY BC 5xxx series		6,59	0,19	2,8	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		6,71	0,36	5,3	41	0							41		
(772) Sysmex XN, XR series		6,84	0,19	2,8	91	0							91		
Other					11	0							11		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765, 1x 999								
Sample B		6,01	0,21	3,4	179		CVP	6,01	0,038	15%	5,1	6,92	179	178	99
(702) Abbott CELL-DYN Emerald		5,85	0,67	11	7	0							7		
(741) Nihon Kohden Celltac Alfa		5,9	0,18	3	13	0							13		
(755) Sysmex KX, XP, XQ series		5,83	0,19	3,2	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		5,8	0,15	2,6	6	0							6		
(768) MINDRAY BC 5xxx series		5,92	0,12	2	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		6,01	0,23	3,9	41	0							41		
(772) Sysmex XN, XR series		6,09	0,14	2,2	91	0							91		
Other					11	0							11		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765, 1x 999								
(151) **RBC**	[$\cdot 10^{12}$/L]				179								179	175	98
Sample A		3,54	0,07	2	179		CVP	3,54	0,013	7%	3,29	3,79	179	177	99
(702) Abbott CELL-DYN Emerald		3,55	0,12	3,3	7	0							7		
(741) Nihon Kohden Celltac Alfa		3,62	0,061	1,7	13	0							13		
(755) Sysmex KX, XP, XQ series		3,57	0,037	1	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		3,56	0,082	2,3	6	0							6		
(768) MINDRAY BC 5xxx series		3,49	0,067	1,9	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		3,57	0,074	2,1	41	0							41		
(772) Sysmex XN, XR series		3,52	0,048	1,4	91	0							91		
Other					11	0							11		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765, 1x 999								
Sample B		4,09	0,075	1,8	179		CVP	4,09	0,014	7%	3,8	4,38	179	175	98
(702) Abbott CELL-DYN Emerald		4,06	0,074	1,8	7	0							7		
(741) Nihon Kohden Celltac Alfa		4,19	0,11	2,7	13	0							13		
(755) Sysmex KX, XP, XQ series		4,1	0,045	1,1	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		4,09	0,11	2,7	6	0							6		
(768) MINDRAY BC 5xxx series		4,07	0,045	1,1	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		4,12	0,078	1,9	41	0							41		
(772) Sysmex XN, XR series		4,06	0,059	1,4	91	0							91		
Other					11	0							11		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765, 1x 999								
(152) **Haemoglobin**	[g/L]				186								186	184	99
Sample A		123	1,9	1,6	186		CVP	123	0,35	6%	115	131	186	185	99
(702) Abbott CELL-DYN Emerald		126	3	2,4	7	0							7		
(741) Nihon Kohden Celltac Alfa		123	2,5	2	13	0							13		
(755) Sysmex KX, XP, XQ series		124	1,5	1,2	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		122	3	2,4	6	0							6		
(768) MINDRAY BC 5xxx series		122	1,5	1,2	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		123	1,5	1,2	41	0							41		
(772) Sysmex XN, XR series		122	1,5	1,2	91	0							91		
(999) another system		125	2,2	1,8	8	0							8		
Other					10	0							10		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765								
Sample B		120	1,9	1,6	186		CVP	120	0,34	6%	112	128	186	184	99
(702) Abbott CELL-DYN Emerald		123	2,2	1,8	7	0							7		
(741) Nihon Kohden Celltac Alfa		120	3,3	2,8	13	0							13		
(755) Sysmex KX, XP, XQ series		121	1,5	1,2	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		118	4,4	3,8	6	0							6		
(768) MINDRAY BC 5xxx series		119	1,5	1,2	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		120	1,4	1,2	41	0							41		
(772) Sysmex XN, XR series		119	1,6	1,3	91	0							91		
(999) another system		122	2,2	1,8	8	0							8		

Summary statistics - quantitative results

EQA round: KO8/26 - Blood Count

Deadline: 23.10.2026

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

Test / Sample / Group	[unit]	RoM	SD	CV [%]	N_{tot}	N_{out}	Comparability	AV	U_{AV}	D_{max}	LL	UL	N_{eva}	N_{suc}	S_{rel} [%]
Other					10	0							10		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765								
(153) **HCT**	[-]				173								173	171	99
Sample A		0,374	0,009	2,4	173		CVP	0,374	0,002	10%	0,336	0,412	173	173	100
(702) Abbott CELL-DYN Emerald		0,382	0,019	4,8	7	0							7		
(741) Nihon Kohden Celltac Alfa		0,367	0,02	5,5	8	0							8		
(755) Sysmex KX, XP, XQ series		0,37	0,007	1,8	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		0,374	0,007	2	6	0							6		
(768) MINDRAY BC 5xxx series		0,356	0,002	0,42	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		0,37	0,008	2,3	41	0							41		
(772) Sysmex XN, XR series		0,377	0,007	1,8	91	0							91		
Other					10	0							10		
							1x 706, 1x 716, 2x 718, 2x 737, 2x 763, 1x 765, 1x 999								
Sample B		0,372	0,01	2,7	173		CVP	0,372	0,002	10%	0,334	0,41	173	171	99
(702) Abbott CELL-DYN Emerald		0,372	0,02	5,4	7	0							7		
(741) Nihon Kohden Celltac Alfa		0,363	0,022	5,9	8	0							8		
(755) Sysmex KX, XP, XQ series		0,372	0,005	1,4	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		0,366	0,007	2	6	0							6		
(768) MINDRAY BC 5xxx series		0,357	0,004	1	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		0,367	0,009	2,3	41	0							41		
(772) Sysmex XN, XR series		0,377	0,007	1,9	91	0							91		
Other					10	0							10		
							1x 706, 1x 716, 2x 718, 2x 737, 2x 763, 1x 765, 1x 999								
(154) **MCV**	[fL]				173								173	171	99
Sample A		106	2,7	2,6	173		CVP	106	0,51	10%	95,4	117	173	172	99
(702) Abbott CELL-DYN Emerald		108	3,2	2,9	7	0							7		
(741) Nihon Kohden Celltac Alfa		101	4,2	4,1	8	0							8		
(755) Sysmex KX, XP, XQ series		104	0,52	0,5	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		104	2,3	2,2	6	0							6		
(768) MINDRAY BC 5xxx series		102	0,82	0,8	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		103	2,7	2,6	41	0							41		
(772) Sysmex XN, XR series		107	1,6	1,5	91	0							91		
Other					10	0							10		
							1x 706, 1x 716, 2x 718, 2x 737, 2x 763, 1x 765, 1x 999								
Sample B		91,1	2,5	2,7	173		CVP	91,1	0,47	10%	81,9	101	173	171	99
(702) Abbott CELL-DYN Emerald		91,6	3,3	3,6	7	0							7		
(741) Nihon Kohden Celltac Alfa		86,3	3	3,5	8	0							8		
(755) Sysmex KX, XP, XQ series		90,2	0,67	0,74	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		89,1	2,9	3,2	6	0							6		
(768) MINDRAY BC 5xxx series		87,7	1,6	1,9	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		88,9	2,2	2,4	41	0							41		
(772) Sysmex XN, XR series		92,6	1,3	1,4	91	0							91		
Other					10	0							10		
							1x 706, 1x 716, 2x 718, 2x 737, 2x 763, 1x 765, 1x 999								
(156) **RDW**	[%]				155								144	141	98
Sample A		12	0,28	2,4	155								144	141	98
(63) Sysmex; (772) Sysmex XN, XR series		12,1	0,16	1,3	91	0	CVPG	12,1	0,043	10%	10,8	13,4	91		
(157) Nihon Kohden; (741) Nihon Kohden Celltac Alfa		10,4	1,1	11	7	0	CVPG	10,4	1,1	10%	9,36	11,5	7		
(177) Mindray; (771) MINDRAY BC 6xxx, 7xx series		11,9	0,26	2,2	36	0	CVPG	11,9	0,12	10%	10,7	13,1	36		
Other					21	0							10		
							2x 1/702, 2x 1/763, 2x 12/718, 4x 63/755, 3x 177/766, 3x 177/768, 2x 179/737, 1x 204/716, 1x 205/706, 1x 999/999								
Sample B		12,4	0,26	2,1	155								144	142	99
(63) Sysmex; (772) Sysmex XN, XR series		12,3	0,16	1,3	91	0	CVPG	12,3	0,043	10%	11	13,6	91		
(157) Nihon Kohden; (741) Nihon Kohden Celltac Alfa		11,3	1,2	10	7	0	CVPG	11,3	1,2	10%	10,1	12,5	7		
(177) Mindray; (771) MINDRAY BC 6xxx, 7xx series		12,6	0,21	1,6	36	0	CVPG	12,6	0,088	10%	11,3	13,9	36		
Other					21	0							10		
							2x 1/702, 2x 1/763, 2x 12/718, 4x 63/755, 3x 177/766, 3x 177/768, 2x 179/737, 1x 204/716, 1x 205/706, 1x 999/999								
(155) **Platelets**	[$\cdot 10^9$/L]				179								179	172	96
Sample A		253	14	5,4	179		CVP	253	2,5	18%	207	299	179	174	97
(702) Abbott CELL-DYN Emerald		293	40	14	7	0							7		
(741) Nihon Kohden Celltac Alfa		250	16	6,6	13	0							13		
(755) Sysmex KX, XP, XQ series		246	5,9	2,4	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		241	16	6,8	6	0							6		
(768) MINDRAY BC 5xxx series		253	13	5	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		253	12	4,9	41	0							41		
(772) Sysmex XN, XR series		253	12	4,8	91	0							91		

Summary statistics - quantitative results

EQA round: KO8/26 - Blood Count

Deadline: 23.10.2026

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

Test / Sample / Group	[unit]	RoM	SD	CV [%]	N_{tot}	N_{out}	Comparability	AV	U_{AV}	D_{max}	LL	UL	N_{eva}	N_{suc}	S_{rel} [%]
Other					11	0							11		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765, 1x 999								
Sample B		311	17	5,5	179		CVP	311	3,1	18%	255	367	179	175	98
(702) Abbott CELL-DYN Emerald		347	44	13	7	0							7		
(741) Nihon Kohden Celltac Alfa		302	25	8,2	13	0							13		
(755) Sysmex KX, XP, XQ series		316	19	5,9	5	0							5		
(766) MINDRAY BC 2xxx, 3xxx series		311	16	5,2	6	0							6		
(768) MINDRAY BC 5xxx series		311	7,4	2,4	5	0							5		
(771) MINDRAY BC 6xxx, 7xx series		312	17	5,4	41	0							41		
(772) Sysmex XN, XR series		312	14	4,6	91	0							91		
Other					11	0							11		
							1x 706, 1x 716, 2x 718, 2x 737, 1x 744, 2x 763, 1x 765, 1x 999								
(157) **MPV**	[fL]				152								139	138	99
Sample A		9,23	0,33	3,6	152								139	139	100
(63) Sysmex; (755) Sysmex KX, XP, XQ series		9	0,15	1,6	5	0	CVPG	9,4	0,044	18%	7,7	11,1	5		
(63) Sysmex; (772) Sysmex XN, XR series		9,41	0,16	1,7	90	0	CVPG	9,4	0,044	18%	7,7	11,1	90		
(177) Mindray; (771) MINDRAY BC 6xxx, 7xx series		9	0,3	3,3	36	0	CVPG	8,98	0,1	18%	7,36	10,6	36		
Other					21	0							8		
							2x 1/702, 1x 1/763, 2x 12/718, 3x 157/741, 4x 177/766, 4x 177/768, 2x 179/737, 1x 204/716, 1x 205/706, 1x 999/999								
Sample B		9,53	0,36	3,7	152								139	138	99
(63) Sysmex; (755) Sysmex KX, XP, XQ series		9,35	0,22	2,4	5	0	CVPG	9,69	0,058	18%	7,94	11,5	5		
(63) Sysmex; (772) Sysmex XN, XR series		9,7	0,22	2,3	90	0	CVPG	9,69	0,058	18%	7,94	11,5	90		
(177) Mindray; (771) MINDRAY BC 6xxx, 7xx series		9,4	0,28	2,9	36	1	CVPG	9,34	0,1	18%	7,65	11,1	36		
Other					21	0							8		
							2x 1/702, 1x 1/763, 2x 12/718, 3x 157/741, 4x 177/766, 4x 177/768, 2x 179/737, 1x 204/716, 1x 205/706, 1x 999/999								
(129) **Immature platelet fraction**	[%]				36								35	31	89
Sample A		2,11	0,44	21	36								35	32	91
(63) Sysmex; (772) Sysmex XN, XR series		2,23	0,34	15	25	0	CVPG	2,23	0,17	40%	1,33	3,13	25		
(177) Mindray; (771) MINDRAY BC 6xxx, 7xx series		1,49	0,73	49	10	2	CVPG	1,49	0,55	40%	0,894	2,09	10		
Other					1	0							0		
							1x 1/763								
Sample B		1,51	0,33	22	36								35	31	89
(63) Sysmex; (772) Sysmex XN, XR series		1,46	0,25	17	25	0	CVPG	1,46	0,12	40%	0,876	2,05	25		
(177) Mindray; (771) MINDRAY BC 6xxx, 7xx series		1,75	0,67	38	10	1	CVPG	1,75	0,82	40%	1,05	2,45	10		
Other					1	0							0		
							1x 1/763								
(158) **PDW [%]**	[%]				5								0		
Sample A		17,5	0,77	4,4	5								0		
Other					5	0							0		
							3x 157/741, 1x 179/737, 1x 205/706								
Sample B		17,6	0,37	2,1	5								0		
Other					5	0							0		
							3x 157/741, 1x 179/737, 1x 205/706								
(165) **PDW [fL]**	[fL]				89								89	89	100
Sample A		9,42	0,42	4,5	89		CVP	9,42	0,11	15%	8	10,9	89	89	100
(772) Sysmex XN, XR series		9,39	0,41	4,3	85	0							85		
Other					4	0							4		
							4x 755								
Sample B		10,5	0,48	4,5	89		CVP	10,5	0,12	15%	8,92	12,1	89	89	100
(772) Sysmex XN, XR series		10,5	0,47	4,4	85	0							85		
Other					4	0							4		
							4x 755								
(166) **PDW [-]**	[-]				32								32	31	97
Sample A		15,8	0,16	1	32		CVP	15,8	0,071	15%	13,4	18,2	32	31	97
(771) MINDRAY BC 6xxx, 7xx series		15,8	0,13	0,85	26	0							26		
Other					6	0							6		
							3x 766, 2x 768, 1x 999								
Sample B		15,8	0,14	0,89	32		CVP	15,8	0,061	15%	13,4	18,2	32	31	97
(771) MINDRAY BC 6xxx, 7xx series		15,8	0,13	0,79	26	0							26		
Other					6	0							6		
							3x 766, 2x 768, 1x 999								
(160) **Neutrophiles**	[$\cdot 10^9$/L]				137								137	133	97
Sample A		4,06	0,18	4,4	137		CVP	4,06	0,038	25%	3,04	5,08	137	133	97
(771) MINDRAY BC 6xxx, 7xx series		4,11	0,22	5,4	37	1							37		
(772) Sysmex XN, XR series		4,07	0,14	3,6	88	0							88		
Other					12	0							12		
							1x 716, 2x 718, 2x 737, 2x 763, 2x 766, 2x 768, 1x 999								
Sample B		3,47	0,12	3,5	137		CVP	3,47	0,026	25%	2,6	4,34	137	136	99
(771) MINDRAY BC 6xxx, 7xx series		3,51	0,16	4,6	37	0							37		

Summary statistics - quantitative results

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Test / Sample / Group	[unit]	RoM	SD	CV [%]	N_{tot}	N_{out}	Comparability: AV	U_{AV}	D_{max}	LL	UL	N_{eva}	N_{suc}	S_{rel} [%]
(772) Sysmex XN, XR series		3,47	0,091	2,6	88	0						88		
Other					12	0						12		
							1x 716, 2x 718, 2x 737, 2x 763, 2x 766, 2x 768, 1x 999							
(161) **Lymphocytes**	[·10^9/L]				139							139	137	99
Sample A		2,11	0,1	4,9	139		CVP	2,11	0,022	25%	1,58	2,64	139	137	99
(771) MINDRAY BC 6xxx, 7xx series		2,04	0,11	5,5	37	0						37		
(772) Sysmex XN, XR series		2,14	0,078	3,7	88	0						88		
Other					14	0						14		
							1x 702, 1x 716, 2x 718, 2x 737, 1x 755, 2x 763, 2x 766, 2x 768, 1x 999							
Sample B		1,85	0,085	4,6	139		CVP	1,85	0,018	25%	1,38	2,32	139	139	100
(771) MINDRAY BC 6xxx, 7xx series		1,84	0,08	4,4	37	0						37		
(772) Sysmex XN, XR series		1,86	0,08	4,3	88	0						88		
Other					14	0						14		
							1x 702, 1x 716, 2x 718, 2x 737, 1x 755, 2x 763, 2x 766, 2x 768, 1x 999							
(162) **Monocytes**	[·10^9/L]				137							137	132	96
Sample A		0,446	0,075	17	137		CVP	0,446	0,016	50%	0,223	0,669	137	134	98
(771) MINDRAY BC 6xxx, 7xx series		0,371	0,033	8,9	37	0						37		
(772) Sysmex XN, XR series		0,488	0,033	6,8	88	0						88		
Other					12	0						12		
							1x 716, 2x 718, 2x 737, 2x 763, 2x 766, 2x 768, 1x 999							
Sample B		0,437	0,072	17	137		CVP	0,437	0,015	50%	0,218	0,656	137	133	97
(771) MINDRAY BC 6xxx, 7xx series		0,36	0,033	9,3	37	0						37		
(772) Sysmex XN, XR series		0,473	0,038	8	88	0						88		
Other					12	0						12		
							1x 716, 2x 718, 2x 737, 2x 763, 2x 766, 2x 768, 1x 999							
(163) **Eosinophils**	[·10^9/L]				136							136	133	98
Sample A		0,102	0,015	15	136		CVP	0,102	0,003	50%	0,051	0,153	136	134	99
(771) MINDRAY BC 6xxx, 7xx series		0,101	0,015	14	37	0						37		
(772) Sysmex XN, XR series		0,102	0,014	14	88	0						88		
Other					11	0						11		
							1x 716, 2x 718, 2x 737, 2x 763, 1x 766, 2x 768, 1x 999							
Sample B		0,226	0,026	12	136		CVP	0,226	0,006	50%	0,113	0,339	136	135	99
(771) MINDRAY BC 6xxx, 7xx series		0,228	0,022	9,8	37	0						37		
(772) Sysmex XN, XR series		0,225	0,026	12	88	0						88		
Other					11	0						11		
							1x 716, 2x 718, 2x 737, 2x 763, 1x 766, 2x 768, 1x 999							
(164) **Basophiles**	[·10^9/L]				136							136	133	98
Sample A		0,036	0,02	54	136		CVP	0,036	0,004	asym.	0	0,201	136	133	98
(771) MINDRAY BC 6xxx, 7xx series		0,028	0,018	64	37	0						37		
(772) Sysmex XN, XR series		0,04	0,015	38	88	0						88		
Other					11	0						11		
							1x 716, 2x 718, 2x 737, 2x 763, 1x 766, 2x 768, 1x 999							
Sample B		0,06	0,019	32	136		CVP	0,06	0,004	asym.	0	0,181	136	136	100
(771) MINDRAY BC 6xxx, 7xx series		0,049	0,027	56	37	0						37		
(772) Sysmex XN, XR series		0,066	0,013	19	88	0						88		
Other					11	0						11		
							1x 716, 2x 718, 2x 737, 2x 763, 1x 766, 2x 768, 1x 999							