

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

Filter: Czech Republic, minimal size of groups n = 5

EQA round: TM3/19 - Tumour Markers

Dead line: 06.08.2019

RoM = robust average	AV = assigned value	Dmax = acceptable percent difference
SD = standard deviation	CRV = certified reference value	LL = lower limit
CV = coefficient of variation	RV = reference value	UL = upper limit
Ntot = total number of participants	CVE = consensus value from experts	Neva = number of evaluated participants
Nout = number of results excluded before calculation	CVP = consensus value from all participants	Nsuc = number of successful participants
	CVPG = consensus value from participants groups	Srel = success (relative)
	U _{AV} = expanded uncertainty of the assigned value (k = 2)	

Test	[unit]	Comparability												
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(180) CA 125					37							37	36	97%
Samples and groups	[kU/L]													
Sample A		10,2	1,6	15	37							37	36	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		11,5	0,57	4,9	15	0	CVPG	11,4	0,18	20%	9,12	13,7	15	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		8,50	1,3	16	7	0	CVPG	8,42	0,23	±2,08	6,42	10,5	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		10,3	0,30	2,9	9	0	CVPG	10,1	0,088	20%	8,08	12,2	9	
Other					6	0							6	
								2x 4/29, 1x 4/149, 3x 4/179						
Sample B		19,9	3,9	20	37							37	37	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		23,6	0,93	4,0	15	0	CVPG	23,4	0,29	20%	18,7	28,1	15	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		15,8	1,5	9,4	7	0	CVPG	15,6	0,31	20%	12,4	18,8	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		19,2	0,52	2,7	9	0	CVPG	18,7	0,16	20%	14,9	22,5	9	
Other					6	0							6	
								2x 4/29, 1x 4/149, 3x 4/179						
(181) CA 15-3					32							32	31	97%
Samples and groups	[kU/L]													
Sample A		12,5	2,2	18	32							32	32	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		12,3	0,86	7,0	10	0	CVPG	12	0,24	18%	9,84	14,2	10	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		9,85	0,37	3,8	8	0	CVPG	9,93	0,23	18%	8,14	11,8	8	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		14,1	0,59	4,2	9	0	CVPG	13,7	0,12	18%	11,2	16,2	9	
Other					5	0							5	
								2x 4/29, 1x 4/149, 2x 4/179						
Sample B		26,1	6,6	25	32							32	31	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		27,4	2,5	9,1	10	0	CVPG	26,4	0,51	18%	21,6	31,2	10	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		17,1	0,30	1,7	8	0	CVPG	17,2	0,29	18%	14,1	20,3	8	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		30,4	1,3	4,2	9	0	CVPG	29,3	0,24	18%	24	34,6	9	
Other					5	0							5	
								2x 4/29, 1x 4/149, 2x 4/179						
(182) CA 19-9					38							38	37	97%
Samples and groups	[kU/L]													
Sample A		110	82	75	38							38	37	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		212	15	7,0	12	0	CVPG	212	4,6	20%	169	255	12	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		59,2	4,2	7,0	9	0	CVPG	59,7	1,3	20%	47,7	71,7	9	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		51,7	4,2	8,2	11	0	CVPG	51,1	0,36	20%	40,8	61,4	11	
Other					6	0							6	
								2x 4/29, 1x 4/149, 3x 4/179						
Sample B		6,15	1,9	31	38							38	38	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		4,38	0,54	12	12	0	CVPG	4,41	0,16	±2,8	1,61	7,21	12	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		5,58	0,48	8,6	9	0	CVPG	5,52	0,26	±2,8	2,72	8,32	9	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		7,66	0,73	9,5	11	0	CVPG	7,49	0,093	±2,81	4,69	10,3	11	
Other					6	0							6	
								2x 4/29, 1x 4/149, 3x 4/179						
(183) CA 72-4					24							23	22	96%
Samples and groups	[kU/L]													
Sample A		1,99	0,21	10	24							23	23	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		1,98	0,20	10	23	0	CVPG	2	0,035	±0,6	1,4	2,6	23	
Other					1	0							0	
								1x 1/999						
Sample B		7,69	0,86	11	24							23	22	96%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		7,62	0,79	10	23	0	CVPG	7,89	0,22	20%	6,31	9,47	23	
Other					1	0							0	
								1x 1/999						

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EQA round: TM3/19 - Tumour Markers

Dead line: 06.08.2019

Test	[unit]						Comparability							
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(184) CYFRA 21-1					17							17	17	100%
Samples and groups	[µg/L]													
Sample A		8,23	0,24	2,9	17							17	17	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		7,95	0,52	6,5	6	0	CVPG	7,63	0,45	18%	6,25	9,01	6	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		8,30	0,19	2,3	11	0	CVPG	8,01	0,090	18%	6,56	9,46	11	
Sample B		34,1	1,6	4,7	17							17	17	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		35,6	0,99	2,8	6	0	CVPG	35,1	1,3	18%	28,7	41,5	6	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		33,3	1,0	3,1	11	0	CVPG	32,3	0,32	18%	26,4	38,2	11	
(185) AFP					37							37	37	100%
Samples and groups	[µg/L]													
Sample A		2,56	0,31	12	37							37	37	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		2,60	0,15	5,8	11	0	CVPG	2,58	0,041	±2	0,58	4,58	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		2,61	0,28	11	8	0	CVPG	2,54	0,073	±2	0,54	4,54	8	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		2,72	0,36	13	9	0	CVPG	2,65	0,042	±2	0,65	4,65	9	
Other					9	0							9	
								1x 3/24, 1x 3/25, 2x 4/29, 1x 4/149, 4x 4/179						
Sample B		7,21	0,50	6,9	37							37	37	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		7,17	0,35	4,9	11	0	CVPG	7,09	0,090	±2	5,09	9,09	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		7,07	0,45	6,4	8	0	CVPG	6,8	0,22	±2	4,8	8,8	8	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		7,72	0,33	4,3	9	0	CVPG	7,51	0,071	±2	5,51	9,51	9	
Other					9	0							9	
								1x 3/24, 1x 3/25, 2x 4/29, 1x 4/149, 4x 4/179						
(186) hCG					45							45	44	98%
Samples and groups	[U/L]													
Sample A		621	51	8,2	45							45	44	98%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		572	16	2,9	13	0	CVPG	562	6,0	18%	460	664	13	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		670	35	5,2	9	0	CVPG	665	8,7	18%	545	785	9	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		639	27	4,2	11	0	CVPG	632	3,5	18%	518	746	11	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		605	25	4,1	5	0	CVPG	615	8,3	18%	504	726	5	
Other					7	0							7	
								1x 3/25, 3x 4/29, 3x 4/210						
Sample B		30,9	2,9	9,3	45							45	45	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		27,8	0,87	3,1	13	0	CVPG	27,8	0,43	18%	22,7	32,9	13	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		33,4	1,0	3,0	9	0	CVPG	32,9	0,46	18%	26,9	38,9	9	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		31,5	1,5	4,8	11	0	CVPG	31,3	0,17	18%	25,6	37	11	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		29,9	0,67	2,2	5	0	CVPG	31,2	0,54	18%	25,5	36,9	5	
Other					7	0							7	
								1x 3/25, 3x 4/29, 3x 4/210						
(189) CEA					40							40	39	98%
Samples and groups	[µg/L]													
Sample A		8,92	0,42	4,7	40							40	40	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		8,98	0,40	4,5	14	0	CVPG	8,88	0,10	16%	7,45	10,4	14	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		8,89	0,24	2,8	10	0	CVPG	9,13	0,18	16%	7,66	10,6	10	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		9,02	0,30	3,4	10	0	CVPG	8,88	0,043	16%	7,45	10,4	10	
Other					6	0							6	
								2x 4/29, 1x 4/149, 3x 4/179						
Sample B		33,5	4,2	12	40							40	39	98%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		37,2	1,5	4,1	14	0	CVPG	36,8	0,39	16%	30,9	42,7	14	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		31,4	2,0	6,3	10	0	CVPG	32	0,68	16%	26,8	37,2	10	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		31,4	0,56	1,8	10	0	CVPG	31,1	0,15	16%	26,1	36,1	10	
Other					6	0							6	
								2x 4/29, 1x 4/149, 3x 4/179						
(191) PSA					47							46	44	96%
Samples and groups	[µg/L]													
Sample A		0,659	0,15	23	47							46	44	96%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		0,484	0,03	6,2	15	0	CVPG	0,487	,0078 ±0,105	0,382	0,592	15		
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		0,795	0,052	6,5	9	0	CVPG	0,799	0,018	15%	0,679	0,919	9	

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

Filter: Czech Republic, minimal size of groups n = 5

EQA round: TM3/19 - Tumour Markers

Dead line: 06.08.2019

Test	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability							
							AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(201) S-100					11							11	11	100%
Samples and groups	[µg/L]													
Sample B		0,070	0,012	16	11							11	11	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		0,069	0,009	14	10	0	CVPG	0,071	0,013	32%	0,048	0,094	10	
Other					1	0							1	
														1x 4/164
(206) Calcitonin					6							4	4	100%
Samples and groups	[ng/L]													
Sample A		4,15	1,9	45	6							4	4	100%
Other					6	0						4		
														2x 1/134, 1x 4/29, 3x 4/164
Sample B		14,4	0,19	1,3	6							4	4	100%
Other					6	0						4		
														2x 1/134, 1x 4/29, 3x 4/164
(207) Thyreoglobulin					20							18	18	100%
Samples and groups	[µg/L]													
Sample A		10,9	4,0	36	20							18	18	100%
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		9,73	1,0	11	6	0	CVPG	10,1	0,47	30%	7,07	13,2	6	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		13,8	0,30	2,1	8	0	CVPG	13,5	0,16	30%	9,45	17,6	8	
Other					6	0							4	
														2x 4/1, 3x 4/29, 1x 4/255
Sample B		129	23	18	20							18	18	100%
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		123	7,5	6,1	6	0	CVPG	126	4,7	30%	88,2	164	6	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		141	8,4	5,9	8	0	CVPG	137	1,9	30%	95,9	179	8	
Other					6	0							4	
														2x 4/1, 3x 4/29, 1x 4/255
(208) beta-2-microglobulin					22							20	17	85%
Samples and groups	[mg/L]													
Sample A		4,42	0,46	11	22							20	19	95%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (Immulin)		4,08	0,41	10	5	0	CVPG	4,26	0,23	21%	3,36	5,16	5	
(6) IMT, IMN; (60) Roche		4,47	0,19	4,3	5	0	CVPG	4,57	0,057	21%	3,61	5,53	5	
Other					12	0							10	
														1x 2/147, 1x 4/60, 1x 4/149, 1x 4/164, 1x 6/1, 3x 6/12, 3x 6/58, 1x 6/149
Sample B		1,56	0,25	16	22							20	17	85%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (Immulin)		1,61	0,15	9,5	5	0	CVPG	1,73	0,097	21%	1,36	2,1	5	
(6) IMT, IMN; (60) Roche		1,57	0,05	3,2	5	0	CVPG	1,57	0,020	21%	1,24	1,9	5	
Other					12	0							10	
														1x 2/147, 1x 4/60, 1x 4/149, 1x 4/164, 1x 6/1, 3x 6/12, 3x 6/58, 1x 6/149

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End of report

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