

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

EQA round: TM3/22 - Tumour Markers

Deadline: 26.07.2022

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 the 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}
(208) beta-2-microglobulin					23							23	23	100%
— Samples and groups	[mg/L]													
Sample A		1,36	0,12	8,5	23							23	23	100%
(6) IMT, IMN; (60) Roche		1,35	0,074	5,5	7	0	CVPG	1,4	0,019	21%	1,1	1,7	7	
Other					16	0							16	
								3x 4/29, 1x 4/164, 4x 6/1, 3x 6/58, 1x 6/91, 3x 6/149, 1x 6/162						
Sample B		4,62	0,29	6,3	23							23	23	100%
(6) IMT, IMN; (60) Roche		4,59	0,27	5,8	7	0	CVPG	4,57	0,046	21%	3,61	5,53	7	
Other					16	0							16	
								3x 4/29, 1x 4/164, 4x 6/1, 3x 6/58, 1x 6/91, 3x 6/149, 1x 6/162						
(185) AFP					40							39	39	100%
— Samples and groups	[µg/L]													
Sample A		22,3	1,8	8,2	40							39	39	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		22,0	1,0	4,6	15	0	CVPG	21,5	0,19	20%	17,2	25,8	15	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		20,5	1,1	5,4	8	0	CVPG	21,3	0,57	20%	17	25,6	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		23,1	1,4	6,3	10	0	CVPG	22,9	0,19	20%	18,3	27,5	10	
Other					7	0							6	
								1x 3/24, 1x 4/29, 1x 4/149, 2x 4/162, 2x 4/179						
Sample B		31,6	2,1	6,5	40							39	39	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		30,9	0,94	3,0	15	0	CVPG	30,6	0,23	20%	24,4	36,8	15	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		30,9	1,4	4,6	8	0	CVPG	30,4	0,69	20%	24,3	36,5	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		33,9	1,6	4,7	10	0	CVPG	32,9	0,28	20%	26,3	39,5	10	
Other					7	0							6	
								1x 3/24, 1x 4/29, 1x 4/149, 2x 4/162, 2x 4/179						
(181) CA 15-3					38							38	36	95%
— Samples and groups	[kU/L]													
Sample A		36,4	7,1	20	38							38	36	95%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		41,8	2,6	6,2	17	0	CVPG	41	0,57	18%	33,6	48,4	17	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		27,9	1,9	6,7	6	0	CVPG	27,8	0,83	18%	22,7	32,9	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		31,6	1,5	4,7	10	0	CVPG	31,5	0,29	18%	25,8	37,2	10	
Other					5	0							5	
								1x 4/29, 4x 4/162						
Sample B		12,5	1,6	13	38							38	37	97%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		12,4	0,98	7,9	17	0	CVPG	12,2	0,17	18%	10	14,4	17	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		10,2	0,74	7,3	6	0	CVPG	9,85	0,28	18%	8,07	11,7	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		13,6	0,93	6,9	10	0	CVPG	13,6	0,13	18%	11,1	16,1	10	
Other					5	0							5	
								1x 4/29, 4x 4/162						
(182) CA 19-9					42							41	40	98%
— Samples and groups	[kU/L]													
Sample A		6,34	1,5	24	42							41	40	98%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		5,31	0,84	16	18	0	CVPG	5,37	0,17	±2,8	2,57	8,17	18	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		5,84	0,24	4,2	6	0	CVPG	5,78	0,21	±2,8	2,98	8,58	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		7,36	0,41	5,6	11	0	CVPG	7,43	0,12	±2,87	4,63	10,3	11	
Other					7	0							6	
								1x 3/25, 1x 4/29, 1x 4/149, 3x 4/162, 1x 4/179						
Sample B		152	120	81	42							41	41	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		272	16	6,0	18	0	CVPG	277	4,9	20%	221	333	18	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		65,0	4,4	6,7	6	0	CVPG	64,5	1,8	20%	51,6	77,4	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		45,4	1,8	3,9	11	0	CVPG	45,8	0,36	20%	36,6	55	11	
Other					7	0							6	
								1x 3/25, 1x 4/29, 1x 4/149, 3x 4/162, 1x 4/179						
(183) CA 72-4					27							26	26	100%
— Samples and groups	[kU/L]													
Sample A		2,10	0,15	7,1	27							26	26	100%

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

EQA round: TM3/22 - Tumour Markers

Deadline: 26.07.2022

Test	[unit]						Comparability							
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(183) CA 72-4														
— Samples and groups	[kU/L]				27							26	26	100%
Sample A														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,10	0,15	7,1	27							26	26	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		2,09	0,14	6,7	26	0	CVPG	2,09	0,027	22%	1,63	2,55	26	
Other					1	0							0	
														1x 1/999
Sample B														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		10,2	0,96	9,4	27							26	26	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		10,1	0,91	8,9	26	0	CVPG	10,7	0,21	22%	8,34	13,1	26	
Other					1	0							0	
														1x 1/999
(180) CA 125														
— Samples and groups	[kU/L]				41							39	38	97%
Sample A														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		11,2	1,9	17	41							39	38	97%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		12,7	0,66	5,2	21	0	CVPG	12,8	0,19	20%	10,2	15,4	21	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		8,62	0,62	7,1	5	0	CVPG	8,89	0,31	±2,01	6,89	10,9	5	
Other		10,6	0,52	4,9	9	0	CVPG	10,7	0,085	20%	8,56	12,9	9	
					6	0							4	
														1x 3/25, 1x 4/29, 1x 4/149, 3x 4/162
Sample B														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		10,4	1,7	16	41							39	39	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		11,6	0,64	5,5	21	0	CVPG	11,7	0,18	20%	9,36	14,1	21	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		8,19	0,61	7,4	5	0	CVPG	8,41	0,31	±2,09	6,41	10,5	5	
Other		10,1	0,32	3,2	9	0	CVPG	10,1	0,075	20%	8,08	12,2	9	
					6	0							4	
														1x 3/25, 1x 4/29, 1x 4/149, 3x 4/162
(189) CEA														
— Samples and groups	[µg/L]				44							43	42	98%
Sample A														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		12,4	2,0	16	44							43	42	98%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		13,6	0,76	5,6	19	0	CVPG	13,4	0,17	16%	11,2	15,6	19	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		13,2	0,37	2,8	6	0	CVPG	13,2	0,32	16%	11	15,4	6	
Other		9,96	0,61	6,1	12	0	CVPG	10,1	0,061	16%	8,48	11,8	12	
					7	0							6	
														1x 3/25, 1x 4/29, 1x 4/149, 3x 4/162, 1x 4/179
Sample B														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		19,2	3,0	15	44							43	43	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		21,3	0,93	4,4	19	0	CVPG	21	0,27	16%	17,6	24,4	19	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		19,2	1,0	5,4	6	0	CVPG	19,9	0,50	16%	16,7	23,1	6	
Other		15,8	0,93	5,9	12	0	CVPG	15,9	0,092	16%	13,3	18,5	12	
					7	0							6	
														1x 3/25, 1x 4/29, 1x 4/149, 3x 4/162, 1x 4/179
(184) CYFRA 21-1														
— Samples and groups	[µg/L]				20							20	20	100%
Sample A														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		0,956	0,32	34	20							20	20	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		0,605	0,067	11	7	0	CVPG	0,59	0,023	±0,234	0,356	0,824	7	
Other		1,15	0,11	9,4	13	0	CVPG	1,09	0,026	±0,24	0,856	1,33	13	
Sample B														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		14,9	0,81	5,4	20							20	20	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		14,2	0,96	6,8	7	0	CVPG	13,5	0,48	18%	11	16	7	
Other		15,2	0,68	4,5	13	0	CVPG	15,1	0,15	18%	12,3	17,9	13	
														2x 4/29, 4x 4/162, 2x 4/179, 1x 4/210
(186) hCG														
— Samples and groups	[U/L]				44							43	42	98%
Sample A														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		106	15	15	44							43	42	98%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		93,6	4,8	5,2	14	0	CVPG	93,2	1,1	18%	76,4	110	14	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		102	1,5	1,5	7	0	CVPG	102	1,4	18%	83,6	121	7	
Other		121	11	8,9	14	0	CVPG	125	0,88	18%	102	148	14	
					9	0							8	
														2x 4/29, 4x 4/162, 2x 4/179, 1x 4/210
Sample B														
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		1,36	0,69	51	44							43	43	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		1,60	0,62	39	14	0	CVPG	1,76	0,15	±1,44	0,32	3,2	14	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		1,38	0,12	8,6	7	0	CVPG	1,36	0,048	±1,44	0	2,8	7	
Other		0,671	0,12	18	14	1	CVPG	0,725	0,020	±1,445	0	2,17	14	

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

EQA round: TM3/22 - Tumour Markers

Deadline: 26.07.2022

Test	[unit]						Comparability							
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(186) hCG	[U/L]				44							43	42	98%
Samples and groups														
Sample B		1,36	0,69	51	44							43	43	100%
Other					9	0						8		
							2x 4/29, 4x 4/162, 2x 4/179, 1x 4/210							
(206) Calcitonin	[ng/L]				6							6	6	100%
Samples and groups														
Sample A		26,2	5,6	22	6							6	6	100%
Other					6	0						6		
							3x 4/60, 3x 4/164							
Sample B		22,3	4,5	20	6							6	6	100%
Other					6	0						6		
							3x 4/60, 3x 4/164							
(194) NSE	[µg/L]				20							19	19	100%
Samples and groups														
Sample A		70,5	4,9	7,0	20							19	19	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		71,7	3,9	5,5	17	0	CVPG	70,5	0,76	30%	49,3	91,7	17	
Other					3	0						2		
							2x 4/164, 1x 4/999							
Sample B		5,53	0,66	12	20							19	19	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		5,46	0,53	9,7	17	0	CVPG	5,53	0,10	30%	3,87	7,19	17	
Other					3	0						2		
							2x 4/164, 1x 4/999							
(191) PSA	[µg/L]				51							50	48	96%
Samples and groups														
Sample A		10,5	1,3	13	51							50	49	98%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		9,37	0,49	5,2	22	0	CVPG	9,38	0,12	15%	7,97	10,8	22	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		12,0	0,61	5,1	8	0	CVPG	12,5	0,26	15%	10,6	14,4	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		11,5	0,55	4,8	14	0	CVPG	11,6	0,066	15%	9,86	13,4	14	
Other					7	0						6		
							2x 4/29, 1x 4/149, 2x 4/162, 1x 4/179, 1x 4/195							
Sample B		3,26	0,50	15	51							50	49	98%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,83	0,14	5,0	22	0	CVPG	2,85	0,038	15%	2,42	3,28	22	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		3,80	0,25	6,6	8	0	CVPG	3,82	0,066	15%	3,24	4,4	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		3,63	0,23	6,3	14	0	CVPG	3,62	0,020	15%	3,07	4,17	14	
Other					7	0						6		
							2x 4/29, 1x 4/149, 2x 4/162, 1x 4/179, 1x 4/195							
(198) free-PSA	[µg/L]				48							47	47	100%
Samples and groups														
Sample A		8,65	1,4	16	48							47	47	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		9,37	0,57	6,1	21	0	CVPG	9,15	0,12	16%	7,68	10,7	21	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		10,0	0,98	9,8	7	0	CVPG	9,76	0,29	16%	8,19	11,4	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		7,02	0,39	5,5	13	0	CVPG	7,05	0,051	16%	5,92	8,18	13	
Other					7	0						6		
							2x 4/29, 1x 4/149, 2x 4/162, 1x 4/179, 1x 4/195							
Sample B		2,42	0,36	15	48							47	47	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,57	0,16	6,2	21	0	CVPG	2,52	0,030	16%	2,11	2,93	21	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		2,88	0,24	8,4	7	0	CVPG	2,87	0,074	16%	2,41	3,33	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		2,05	0,097	4,7	13	0	CVPG	2,07	0,014	16%	1,73	2,41	13	
Other					7	0						6		
							2x 4/29, 1x 4/149, 2x 4/162, 1x 4/179, 1x 4/195							
(201) S-100	[µg/L]				14							14	12	86%
Samples and groups														
Sample A		0,507	0,08	16	14							14	14	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		0,488	0,056	12	12	0	CVPG	0,468	,0071	32%	0,318	0,618	12	
Other					2	0						2		
							2x 4/164							
Sample B		0,041	0,002	6,4	14							14	12	86%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		0,040	0,000	2,2	12	0	CVPG	0,04		±0,013	0,027	0,053	12	
Other					2	0						2		
							2x 4/164							

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

EQA round: TM3/22 - Tumour Markers

Deadline: 26.07.2022

Test	[unit]						Comparability							
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(195) SCCA					14							14	12	86%
Samples and groups	[µg/L]													
Sample A		4,46	0,55	12	14							14	13	93%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		4,55	0,52	11	9	0	CVPG	4,58	0,13	23%	3,52	5,64	9	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		4,19	0,30	7,1	5	0	CVPG	4,22	0,086	23%	3,24	5,2	5	
Sample B		2,33	0,16	7,0	14							14	13	93%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,35	0,074	3,2	9	0	CVPG	2,23	0,068	±0,7	1,53	2,93	9	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		2,32	0,15	6,4	5	0	CVPG	2,19	0,060	±0,7	1,49	2,89	5	
(196) TPA					5							5	5	100%
Samples and groups	[U/L]													
Sample A		55,3	5,2	9,4	5							5	5	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (164) DiaSorin		55,3	5,2	9,4	5	0	CVPG	58,4	1,6	25%	43,8	73	5	
Sample B		2370	170	7,1	5							5	5	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (164) DiaSorin		2370	170	7,1	5	0	CVPG	2350	52	25%	1760	2940	5	
(207) Thyreoglobulin					25							25	25	100%
Samples and groups	[µg/L]													
Sample A		102	8,9	8,8	25							25	25	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		111	8,5	7,6	7	0	CVPG	115	5,5	30%	80,5	150	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		103	6,9	6,7	7	0	CVPG	104	3,3	30%	72,8	136	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		96,7	5,0	5,2	10	0	CVPG	97,8	0,98	30%	68,4	128	10	
Other					1	0							1	
							1x 4/29							
Sample B		47,4	5,0	11	25							25	25	100%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		51,6	7,7	15	7	0	CVPG	51,8	2,4	30%	36,2	67,4	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		44,9	4,5	10	7	0	CVPG	44,7	1,8	30%	31,2	58,2	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		48,1	2,8	5,9	10	0	CVPG	48,4	0,55	30%	33,8	63	10	
Other					1	0							1	
							1x 4/29							
st_kn_p							End of report							Printed: 30.07.2022