

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

Filter: Slovakia, minimal size of groups n = 5

EQA round: TM4/17 - Tumour Markers

Dead line: 24.10.2017

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					29							29	29	100%
Samples and groups	[kU/L]													
Sample A		35,2	4,8	14	29							29	29	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		31,5	2,1	6,6	5	0	CVPG	31,4	0,51	20%	25,1	37,7	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		34,9	2,9	8,3	14	0	CVPG	34,3	0,24	20%	27,4	41,2	14	
Other					10	0							10	
								1x 3/24, 1x 3/25, 4x 4/1, 1x 4/149, 3x 4/179						
Sample B		34,7	4,0	11	29							29	29	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		32,4	3,2	9,9	5	0	CVPG	31,5	0,64	20%	25,2	37,8	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		34,4	1,9	5,6	14	0	CVPG	33,8	0,24	20%	27	40,6	14	
Other					10	0							10	
								1x 3/24, 1x 3/25, 4x 4/1, 1x 4/149, 3x 4/179						
(181) CA 15-3					26							26	24	92%
Samples and groups	[kU/L]													
Sample A		13,3	2,1	16	26							26	25	96%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		10,2	1,1	11	6	0	CVPG	9,85	0,26	18%	8,07	11,7	6	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		14,7	0,48	3,2	12	0	CVPG	14,3	0,12	18%	11,7	16,9	12	
Other					8	0							8	
								1x 3/24, 3x 4/1, 1x 4/149, 3x 4/179						
Sample B		13,5	2,2	16	26							26	25	96%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		10,4	0,96	9,2	6	0	CVPG	10,2	0,24	18%	8,36	12,1	6	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		14,9	0,54	3,6	12	0	CVPG	14,6	0,12	18%	11,9	17,3	12	
Other					8	0							8	
								1x 3/24, 3x 4/1, 1x 4/149, 3x 4/179						
(182) CA 19-9					28							28	27	96%
Samples and groups	[kU/L]													
Sample A		94,0	27	29	28							28	27	96%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		104	5,5	5,3	7	0	CVPG	102	1,9	20%	81,6	123	7	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		74,2	3,1	4,1	14	0	CVPG	70,7	0,49	20%	56,5	84,9	14	
Other					7	0							7	
								1x 3/24, 2x 4/1, 1x 4/149, 3x 4/179						
Sample B		27,2	4,9	18	28							28	27	96%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		27,7	2,5	9,0	7	0	CVPG	27,8	0,59	20%	22,2	33,4	7	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		23,9	1,5	6,5	14	0	CVPG	22,7	0,17	20%	18,1	27,3	14	
Other					7	0							7	
								1x 3/24, 2x 4/1, 1x 4/149, 3x 4/179						
(183) CA 72-4					24							22	21	95%
Samples and groups	[kU/L]													
Sample A		5,34	0,39	7,4	24							22	21	95%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		5,27	0,29	5,4	22	0	CVPG	5,26	0,055	20%	4,2	6,32	22	
Other					2	0							0	
								2x 1/185						
Sample B		4,24	0,27	6,4	24							22	21	95%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		4,21	0,26	6,2	22	0	CVPG	4,2	0,047	20%	3,36	5,04	22	
Other					2	0							0	
								2x 1/185						
(184) CYFRA 21-1					23							23	22	96%
Samples and groups	[µg/L]													
Sample A		4,88	0,43	8,8	23							23	22	96%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		4,98	0,33	6,6	20	0	CVPG	4,95	0,050	18%	4,05	5,85	20	
Other					3	0							3	
								1x 3/24, 2x 4/1						
Sample B		7,52	0,67	8,9	23							23	22	96%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		7,67	0,50	6,6	20	0	CVPG	7,59	0,080	18%	6,22	8,96	20	
Other					3	0							3	
								1x 3/24, 2x 4/1						

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Test	[unit]						Comparability						N _{eva}	N _{suc}	S _{rel}
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL				
(185) AFP					28								28	26	93%
Samples and groups	[µg/L]														
Sample A		16,4	2,0	12	28								28	27	96%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		14,3	1,5	10	6	0	CVPG	15,2	0,30	20%	12,1	18,3	6		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		17,7	1,1	6,1	15	0	CVPG	17,1	0,15	20%	13,6	20,6	15		
Other					7	0							7		
								1x 3/24, 1x 4/1, 2x 4/29, 1x 4/149, 2x 4/179							
Sample B		48,2	6,4	13	28								28	27	96%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		42,0	2,4	5,6	6	0	CVPG	43,2	0,96	20%	34,5	51,9	6		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		52,5	3,1	5,8	15	0	CVPG	50,5	0,51	20%	40,4	60,6	15		
Other					7	0							7		
								1x 3/24, 1x 4/1, 2x 4/29, 1x 4/149, 2x 4/179							
(186) hCG					30								30	29	97%
Samples and groups	[U/L]														
Sample A		5,04	1,2	24	30								30	29	97%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		6,36	0,82	13	6	0	CVPG	6,35	0,099	18%	5,2	7,5	6		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		4,56	0,25	5,5	9	0	CVPG	4,59	0,042	18%	3,76	5,42	9		
(4) LIA (CLIA, CMIA, ILMA); (210) Roche HCG STAT		4,13	0,45	11	8	0	CVPG	4,15	0,17	18%	3,4	4,9	8		
Other					7	0							7		
								1x 3/25, 2x 4/1, 1x 4/29, 1x 4/149, 2x 4/179							
Sample B		34,7	3,4	9,9	30								30	29	97%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		38,0	2,7	7,2	6	0	CVPG	37,3	0,48	18%	30,5	44,1	6		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		35,0	2,4	6,9	9	0	CVPG	34,8	0,24	18%	28,5	41,1	9		
(4) LIA (CLIA, CMIA, ILMA); (210) Roche HCG STAT		33,5	2,2	6,5	8	0	CVPG	33	1,2	18%	27	39	8		
Other					7	0							7		
								1x 3/25, 2x 4/1, 1x 4/29, 1x 4/149, 2x 4/179							
(189) CEA					29								29	27	93%
Samples and groups	[µg/L]														
Sample A		13,7	1,4	10	29								29	29	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		14,9	0,88	5,9	7	0	CVPG	14,9	0,30	16%	12,5	17,3	7		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		12,8	0,37	2,9	13	0	CVPG	12,8	0,063	16%	10,7	14,9	13		
Other					9	0							9		
								3x 4/1, 1x 4/29, 1x 4/149, 4x 4/179							
Sample B		4,76	0,43	9,0	29								29	27	93%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		5,06	0,39	7,6	7	0	CVPG	4,98	0,10	16%	4,18	5,78	7		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		4,69	0,16	3,4	13	0	CVPG	4,64	0,027	16%	3,89	5,39	13		
Other					9	0							9		
								3x 4/1, 1x 4/29, 1x 4/149, 4x 4/179							
(190) TPS					4								4	4	100%
Samples and groups	[U/L]														
Sample A		724	170	23	4								4	4	100%
Other					4	0							4		
								3x 1/43, 1x 2/66							
Sample B		591	150	26	4								4	4	100%
Other					4	0							4		
								3x 1/43, 1x 2/66							
(191) PSA					30								30	29	97%
Samples and groups	[µg/L]														
Sample A		7,89	0,83	11	30								30	29	97%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		8,65	0,074	0,86	5	0	CVPG	8,49	0,16	15%	7,21	9,77	5		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		8,27	0,44	5,3	14	0	CVPG	8,16	0,051	15%	6,93	9,39	14		
(4) LIA (CLIA, CMIA, ILMA); (179) Siemens (Bayer)		7,12	0,29	4,1	5	0	CVPG	7,03	0,073	15%	5,97	8,09	5		
Other					6	0							6		
								2x 4/1, 1x 4/149, 3x 4/195							
Sample B		2,29	0,23	10	30								30	29	97%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		2,36	0,16	6,9	5	0	CVPG	2,47	0,044	15%	2,09	2,85	5		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		2,42	0,10	4,1	14	0	CVPG	2,39	0,016	15%	2,03	2,75	14		
(4) LIA (CLIA, CMIA, ILMA); (179) Siemens (Bayer)		2,09	0,045	2,1	5	0	CVPG	2,06	0,024	15%	1,75	2,37	5		
Other					6	0							6		
								2x 4/1, 1x 4/149, 3x 4/195							

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EQA round: TM4/17 - Tumour Markers

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Test	[unit]						Comparability						N _{eva}	N _{suc}	S _{rel}
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL				
(194) NSE					20								20	20	100%
Samples and groups	[µg/L]														
Sample A		22,5	1,0	4,5	20								20	20	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		22,3	0,89	4,0	18	0	CVPG	21,4	0,20	30%	14,9	27,9	18		
Other					2	0							2		
															2x 3/24
Sample B		70,1	4,1	5,9	20								20	20	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		70,9	3,2	4,5	18	0	CVPG	69,3	0,69	30%	48,5	90,1	18		
Other					2	0							2		
															2x 3/24
(195) SCCA					10								10	8	80%
Samples and groups	[µg/L]														
Sample A		1,09	0,41	37	10								10	9	90%
(4) LIA (CLIA, CMIA, ILMA); (1) Abbott		1,00	0,15	15	5	0	CVPG	0,998	0,038 ± 0,702	0,298	1,7		5		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		1,14	0,14	12	5	0	CVPG	1,26	0,061 ± 0,7	0,56	1,96		5		
Sample B		1,17	0,50	43	10								10	8	80%
(4) LIA (CLIA, CMIA, ILMA); (1) Abbott		0,950	0,074	7,8	5	0	CVPG	0,993	0,036 ± 0,707	0,293	1,7		5		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		1,55	0,52	33	5	0	CVPG	1,36	0,099 ± 0,7	0,66	2,06		5		
(196) TPA					1								1	1	100%
Samples and groups	[U/L]														
Sample A		1060			1								1	1	100%
Other					1	0							1		
															1x 4/164
Sample B		853			1								1	1	100%
Other					1	0							1		
															1x 4/164
(198) free-PSA					22								22	21	95%
Samples and groups	[µg/L]														
Sample A		5,75	0,49	8,4	22								22	21	95%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		6,81	0,074	1,1	5	0	CVPG	7	0,17	16%	5,88	8,12	5		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		5,50	0,40	7,2	10	0	CVPG	5,38	0,030	16%	4,51	6,25	10		
Other					7	0							7		
															2x 4/1, 1x 4/149, 3x 4/179, 1x 4/195
Sample B		1,53	0,12	8,0	22								22	21	95%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		1,86	0,16	8,8	5	0	CVPG	1,94	0,044	16%	1,62	2,26	5		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		1,49	0,10	6,8	10	0	CVPG	1,48	0,090	16%	1,24	1,72	10		
Other					7	0							7		
															2x 4/1, 1x 4/149, 3x 4/179, 1x 4/195
(201) S-100					7								5	5	100%
Samples and groups	[µg/L]														
Sample A		0,237	0,07	29	7								5	5	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		0,271	0,019	7,1	5	0	CVPG	0,257	0,035	32%	0,174	0,34	5		
Other					2	0							0		
															2x 2/98
Sample B		0,119	0,018	15	7								5	5	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		0,126	0,008	6,5	5	0	CVPG	0,122	0,016	32%	0,082	0,162	5		
Other					2	0							0		
															2x 2/98
(206) Calcitonin					6								6	5	83%
Samples and groups	[ng/L]														
Sample A		1,32	1,2	90	6								6	5	83%
Other					6	0							6		
															2x 1/24, 1x 4/29, 3x 4/60
Sample B		67,7	14	20	6								6	5	83%
Other					6	0							6		
															2x 1/24, 1x 4/29, 3x 4/60
(207) Thyreoglobulin					11								11	11	100%
Samples and groups	[µg/L]														
Sample A		49,8	13	26	11								11	11	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		58,4	1,3	2,3	5	0	CVPG	59,7	0,61	30%	41,7	77,7	5		
Other					6	0							6		
															2x 3/24, 2x 4/12, 2x 4/29
Sample B		35,8	10	29	11								11	11	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		43,8	0,39	0,90	5	0	CVPG	44,1	0,48	30%	30,8	57,4	5		
Other					6	0							6		
															2x 3/24, 2x 4/12, 2x 4/29

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EQA round: TM4/17 - Tumour Markers

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Test	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability							
							AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(208) beta-2-microglobulin					17							15	11	73%
Samples and groups	[mg/L]													
Sample A		3,48	0,37	11	17							15	12	80%
(6) IMT, IMN; (60) Roche		3,37	0,18	5,3	5	0	CVPG	3,33	0,037	21%	2,63	4,03	5	
Other					12	0						10		
								2x 1/36, 1x 4/29, 1x 6/1, 3x 6/58, 2x 6/75, 3x 6/149						
Sample B		2,39	0,25	10	17							15	12	80%
(6) IMT, IMN; (60) Roche		2,32	0,16	7,0	5	0	CVPG	2,29	0,030	21%	1,8	2,78	5	
Other					12	0						10		
								2x 1/36, 1x 4/29, 1x 6/1, 3x 6/58, 2x 6/75, 3x 6/149						

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End of report

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