

EQA round: TM3/24 - Tumour Markers

Deadline: 23.7.2024

Setup: groups - M (measurement principle), R (manufacturer of kit); Slovakia; minimal size of the groups n = 5

RoM = robust average	AV = assigned value	D _{max} = acceptable difference
SD = standard deviation	CVPG = consensus of the participants' groups	LL = lower limit
CV = coefficient of variation	U _{AV} = expanded uncertainty of the assigned value (k = 2)	UL = upper limit
N _{tot} = total number of the results		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			
(208) β-2-microglobulin	[mg/L]				11							10	9	90
Sample A												10	9	90
Other					11	0			1x 4/29, 1x 6/1, 3x 6/58, 3x 6/60, 1x 6/162, 1x 6/177, 1x 6/179			10		
Sample B												10	10	100
Other					11	0			1x 4/29, 1x 6/1, 3x 6/58, 3x 6/60, 1x 6/162, 1x 6/177, 1x 6/179			10		
(185) AFP	[µg/L]				12							12	11	92
Sample A												12	11	92
Other					12	0			2x 4/1, 4x 4/12, 4x 4/60, 1x 4/162, 1x 4/179			12		
Sample B												12	11	92
Other					12	0			2x 4/1, 4x 4/12, 4x 4/60, 1x 4/162, 1x 4/179			12		
(181) CA 15-3	[kU/L]				11							11	11	100
Sample A												11	11	100
Other					11	0			3x 4/1, 3x 4/12, 3x 4/60, 1x 4/162, 1x 4/179			11		
Sample B												11	11	100
Other					11	0			3x 4/1, 3x 4/12, 3x 4/60, 1x 4/162, 1x 4/179			11		
(182) CA 19-9	[kU/L]				12							12	11	92
Sample A		69	39	57	12							12	11	92
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		51,8	1,4	2,7	5	0	CVPG	50,8	1,2	20%	40,6	61	5	
Other					7	0							7	
									2x 4/1, 3x 4/60, 1x 4/162, 1x 4/179					
Sample B		6,37	1,5	23	12							12	12	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		5,15	0,22	4,3	5	0	CVPG	4,81	0,22	±2,8	2,01	7,61	5	
Other					7	0							7	
									2x 4/1, 3x 4/60, 1x 4/162, 1x 4/179					
(183) CA 72-4	[kU/L]				11							11	11	100
Sample A												11	11	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		1,47	0,12	8,1	11	0	CVPG	1,51	0,026	22%	1,17	1,85	11	
Sample B												11	11	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		3,71	0,19	5,2	11	0	CVPG	3,72	0,044	22%	2,9	4,54	11	
(180) CA 125	[kU/L]				12							12	12	100
Sample A		10,1	1,7	17	12							12	12	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		11,3	0,74	6,6	5	0	CVPG	11,6	0,18	20%	9,28	14	5	
Other					7	0							7	
									2x 4/12, 3x 4/60, 1x 4/162, 1x 4/179					
Sample B		17,4	3,3	19	12							12	12	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		20	0,82	4,1	5	0	CVPG	21	0,26	20%	16,8	25,2	5	
Other					7	0							7	
									2x 4/12, 3x 4/60, 1x 4/162, 1x 4/179					
(189) CEA	[µg/L]				12							12	12	100
Sample A		48,5	6,7	14	12							12	12	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		43,4	1,9	4,4	5	0	CVPG	42,8	1,2	16%	35,9	49,7	5	
Other					7	0							7	
									2x 4/1, 3x 4/60, 1x 4/162, 1x 4/179					
Sample B		16,3	2	12	12							12	12	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		15,5	0,52	3,4	5	0	CVPG	14,7	0,4	16%	12,3	17,1	5	
Other					7	0							7	
									2x 4/1, 3x 4/60, 1x 4/162, 1x 4/179					
(184) CYFRA 21-1	[µg/L]				10							10	10	100
Sample A		8,01	1	12	10							10	10	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		8,49	0,67	8	7	0	CVPG	8,45	0,087	18%	6,92	9,98	7	
Other					3	0							3	
									3x 4/1					
Sample B		9,04	1,2	13	10							10	10	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		9,55	0,38	4	7	0	CVPG	9,68	0,084	18%	7,93	11,5	7	

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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			
Other					3	0	3x 4/1					3		
(186) hCG	[U/L]				13							13	12	92
Sample A		282	44	16	13							13	12	92
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		258	13	5,1	6	0	CVPG	258	5	18%	211	305	6	
Other					7	0	3x 4/60, 1x 4/162, 1x 4/179, 2x 4/210					7		
Sample B		104	5,4	5,2	13							13	12	92
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		108	1,8	1,7	6	0	CVPG	107	2	18%	87,7	127	6	
Other					7	0	3x 4/60, 1x 4/162, 1x 4/179, 2x 4/210					7		
(206) Calcitonin	[ng/L]				3							3	2	67
Sample A												3	3	100
Other					3	0	1x 4/29, 2x 4/60					3		
Sample B												3	2	67
Other					3	0	1x 4/29, 2x 4/60					3		
(194) NSE	[µg/L]				11							11	11	100
Sample A		116	9,1	7,9	11							11	11	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		117	7,9	6,7	10	0	CVPG	110	0,91	30%	77	143	10	
Other					1	0	1x 3/24					1		
Sample B		6,05	0,43	7,1	11							11	11	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		5,99	0,37	6,2	10	0	CVPG	5,78	0,052	30%	4,04	7,52	10	
Other					1	0	1x 3/24					1		
(187) p2PSA	[ng/L]				1							1	1	100
Sample A												1	1	100
Other					1	0	1x 4/12					1		
Sample B												1	1	100
Other					1	0	1x 4/12					1		
(191) PSA	[µg/L]				12							12	11	92
Sample A												12	11	92
Other					12	0	2x 4/1, 3x 4/12, 3x 4/60, 1x 4/162, 1x 4/179, 2x 4/195					12		
Sample B												12	11	92
Other					12	0	2x 4/1, 3x 4/12, 3x 4/60, 1x 4/162, 1x 4/179, 2x 4/195					12		
(198) free-PSA	[µg/L]				9							9	7	78
Sample A												9	7	78
Other					9	0	2x 4/1, 1x 4/12, 3x 4/60, 1x 4/179, 2x 4/195					9		
Sample B												9	8	89
Other					9	0	2x 4/1, 1x 4/12, 3x 4/60, 1x 4/179, 2x 4/195					9		
(201) S-100	[µg/L]				8							8	8	100
Sample A												8	8	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		0,073	0,006	8,1	8	0	CVPG	0,07	0,001	32%	0,047	0,093	8	
Sample B												8	8	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		0,107	0,01	9	8	0	CVPG	0,102	0,001	32%	0,069	0,135	8	
(195) SCCA	[µg/L]				8							7	6	86
Sample A												7	7	100
Other					8	0	4x 4/1, 3x 4/60, 1x 4/162					7		
Sample B												7	6	86
Other					8	0	4x 4/1, 3x 4/60, 1x 4/162					7		
(207) Thyreoglobulin	[µg/L]				5							4	4	100
Sample A												4	4	100
Other					5	0	1x 3/24, 2x 4/12, 1x 4/60, 1x 4/179					4		
Sample B												4	4	100
Other					5	0	1x 3/24, 2x 4/12, 1x 4/60, 1x 4/179					4		