

## Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

Filter: Slovakia, minimal size of groups n = 5

## EQA round: TM2/18 - Tumour Markers

Dead line: 08.05.2018

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 <sub>AV</sub> = expanded uncertainty of the assigned value (k = 2)	

Test	[unit]	Comparability					Comparability							
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>
<b>(180) CA 125</b>					23							23	22	96%
Samples and groups	[kU/L]													
<b>Sample A</b>		62,0	7,1	11	23							23	22	96%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		60,0	2,1	3,5	5	0	CVPG	61,4	1,4	20%	49,1	73,7	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		60,9	4,1	6,8	11	0	CVPG	58,4	0,47	20%	46,7	70,1	11	
Other					7	0							7	
								1x 3/24, 1x 3/25, 3x 4/1, 2x 4/179						
<b>Sample B</b>		14,0	2,4	17	23							23	23	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		11,0	0,63	5,7	5	0	CVPG	11,6	0,38	20%	9,28	14	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		15,1	1,1	7,1	11	0	CVPG	14,3	0,13	20%	11,4	17,2	11	
Other					7	0							7	
								1x 3/24, 1x 3/25, 3x 4/1, 2x 4/179						
<b>(181) CA 15-3</b>					20							20	19	95%
Samples and groups	[kU/L]													
<b>Sample A</b>		38,3	7,5	20	20							20	19	95%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		29,2	0,60	2,1	5	0	CVPG	28,3	0,66	18%	23,2	33,4	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		42,0	3,0	7,2	10	0	CVPG	42,5	0,36	18%	34,8	50,2	10	
Other					5	0							5	
								1x 3/24, 2x 4/1, 2x 4/179						
<b>Sample B</b>		30,0	9,0	30	20							20	19	95%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		17,3	0,36	2,1	5	0	CVPG	16,8	0,48	18%	13,7	19,9	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		34,6	2,3	6,7	10	0	CVPG	35,1	0,31	18%	28,7	41,5	10	
Other					5	0							5	
								1x 3/24, 2x 4/1, 2x 4/179						
<b>(182) CA 19-9</b>					22							22	19	86%
Samples and groups	[kU/L]													
<b>Sample A</b>		8,05	2,2	28	22							22	21	95%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		6,50	0,44	6,8	7	0	CVPG	6,32	0,21	±2,8	3,52	9,12	7	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		9,20	1,4	15	11	0	CVPG	9,18	0,11	±2,82	6,38	12	11	
Other					4	0							4	
								1x 3/24, 1x 4/1, 2x 4/179						
<b>Sample B</b>		59,4	13	21	22							22	20	91%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		65,3	2,2	3,3	7	0	CVPG	65	1,1	20%	52	78	7	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		50,3	6,1	12	11	0	CVPG	46,7	0,37	20%	37,3	56,1	11	
Other					4	0							4	
								1x 3/24, 1x 4/1, 2x 4/179						
<b>(183) CA 72-4</b>					21							19	19	100%
Samples and groups	[kU/L]													
<b>Sample A</b>		10,2	0,70	6,9	21							19	19	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		10,1	0,54	5,4	19	0	CVPG	10,4	0,13	20%	8,32	12,5	19	
Other					2	0							0	
								2x 1/185						
<b>Sample B</b>		3,08	0,18	5,9	21							19	19	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		3,05	0,15	5,0	19	0	CVPG	3,11	0,040	20%	2,48	3,74	19	
Other					2	0							0	
								2x 1/185						
<b>(184) CYFRA 21-1</b>					21							21	21	100%
Samples and groups	[µg/L]													
<b>Sample A</b>		51,5	2,6	5,0	21							21	21	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		51,4	2,2	4,3	19	0	CVPG	50,6	0,50	18%	41,4	59,8	19	
Other					2	0							2	
								1x 3/24, 1x 4/1						
<b>Sample B</b>		3,59	0,29	8,1	21							21	21	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		3,64	0,22	6,1	19	0	CVPG	3,53	0,069	18%	2,89	4,17	19	
Other					2	0							2	
								1x 3/24, 1x 4/1						

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## EQA round: TM2/18 - Tumour Markers

Dead line: 08.05.2018

Test	[unit]						Comparability						N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL				
<b>(185) AFP</b>					22								22	20	91%
Samples and groups	[µg/L]														
<b>Sample A</b>		28,3	3,2	11	22								22	20	91%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		27,4	3,1	11	8	0	CVPG	26,8	0,61	20%	21,4	32,2	8		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		30,1	2,6	8,5	10	0	CVPG	30	0,25	20%	24	36	10		
Other					4	0							4		
								1x 3/24, 1x 4/1, 2x 4/179							
<b>Sample B</b>		68,5	8,8	13	22								22	20	91%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		63,6	7,4	12	8	0	CVPG	61,7	2,0	20%	49,3	74,1	8		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		75,2	5,3	7,0	10	0	CVPG	73,9	0,77	20%	59,1	88,7	10		
Other					4	0							4		
								1x 3/24, 1x 4/1, 2x 4/179							
<b>(186) hCG</b>					24								24	24	100%
Samples and groups	[U/L]														
<b>Sample A</b>		19,7	2,2	11	24								24	24	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		21,6	1,4	6,3	7	0	CVPG	22	0,28	18%	18	26	7		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		19,6	1,4	6,9	7	0	CVPG	19,5	0,13	18%	15,9	23,1	7		
(4) LIA (CLIA, CMIA, ILMA); (210) Roche HCG STAT		17,9	0,88	4,9	5	0	CVPG	17,4	0,62	18%	14,2	20,6	5		
Other					5	0							5		
								1x 3/25, 2x 4/1, 2x 4/179							
<b>Sample B</b>		275	47	17	24								24	24	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		254	10	4,1	7	0	CVPG	255	3,9	18%	209	301	7		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		326	24	7,3	7	0	CVPG	318	3,0	18%	260	376	7		
(4) LIA (CLIA, CMIA, ILMA); (210) Roche HCG STAT		245	30	12	5	0	CVPG	251	13	18%	205	297	5		
Other					5	0							5		
								1x 3/25, 2x 4/1, 2x 4/179							
<b>(189) CEA</b>					23								23	23	100%
Samples and groups	[µg/L]														
<b>Sample A</b>		10,1	1,1	11	23								23	23	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		10,6	0,33	3,1	7	0	CVPG	11,2	0,19	16%	9,4	13	7		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		9,14	0,38	4,2	10	0	CVPG	9,24	0,057	16%	7,76	10,8	10		
Other					6	0							6		
								2x 4/1, 4x 4/179							
<b>Sample B</b>		34,1	4,8	14	23								23	23	100%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		36,2	1,7	4,6	7	0	CVPG	36,8	0,70	16%	30,9	42,7	7		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		30,0	2,3	7,8	10	0	CVPG	28,7	0,22	16%	24,1	33,3	10		
Other					6	0							6		
								2x 4/1, 4x 4/179							
<b>(191) PSA</b>					23								23	19	83%
Samples and groups	[µg/L]														
<b>Sample A</b>		2,56	0,35	14	23								23	21	91%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		2,79	0,13	4,5	6	0	CVPG	2,83	0,041	15%	2,4	3,26	6		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		2,71	0,22	8,0	10	0	CVPG	2,57	0,015	15%	2,18	2,96	10		
Other					7	0							7		
								1x 4/1, 4x 4/179, 2x 4/195							
<b>Sample B</b>		9,04	1,4	15	23								23	19	83%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		9,99	0,32	3,2	6	0	CVPG	10,4	0,23	15%	8,84	12	6		
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		9,47	0,98	10	10	0	CVPG	9,03	0,087	15%	7,67	10,4	10		
Other					7	0							7		
								1x 4/1, 4x 4/179, 2x 4/195							
<b>(194) NSE</b>					17								17	15	88%
Samples and groups	[µg/L]														
<b>Sample A</b>		32,4	2,5	7,7	17								17	17	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		32,9	2,3	7,0	12	0	CVPG	31,2	0,38	30%	21,8	40,6	12		
Other					5	0							5		
								2x 3/24, 3x 4/256							
<b>Sample B</b>		14,5	2,9	20	17								17	15	88%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		15,4	1,1	6,9	12	0	CVPG	14,7	0,27	30%	10,2	19,2	12		
Other					5	0							5		
								2x 3/24, 3x 4/256							

## Summary statistics - quantitative results

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## EQA round: TM2/18 - Tumour Markers

Dead line: 08.05.2018

Test	[unit]						Comparability							
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>
<b>(195) SCCA</b>					10							10	9	90%
Samples and groups	[µg/L]													
<b>Sample A</b>		4,36	0,34	7,8	10							10	9	90%
(4) LIA (CLIA, CMIA, ILMA); (1) Abbott		4,50	0,30	6,6	5	0	CVPG	4,89	0,099	23%	3,76	6,02	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		4,26	0,32	7,5	5	0	CVPG	4,73	0,11	23%	3,64	5,82	5	
<b>Sample B</b>		2,07	0,32	15	10							10	9	90%
(4) LIA (CLIA, CMIA, ILMA); (1) Abbott		2,00	0,30	15	5	0	CVPG	2,14	0,088	±0,7	1,44	2,84	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		2,15	0,30	14	5	0	CVPG	2,3	0,11	±0,7	1,6	3	5	
<b>(198) free-PSA</b>					18							18	17	94%
Samples and groups	[µg/L]													
<b>Sample A</b>		1,82	0,17	9,5	18							18	17	94%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		2,14	0,12	5,5	5	0	CVPG	2,33	0,050	16%	1,95	2,71	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		1,72	0,15	8,6	8	0	CVPG	1,74	0,011	16%	1,46	2,02	8	
Other					5	0							5	
								1x 4/1, 3x 4/179, 1x 4/195						
<b>Sample B</b>		6,68	0,65	9,7	18							18	17	94%
(4) LIA (CLIA, CMIA, ILMA); (12) Beckman Coulter		8,33	1,2	15	5	0	CVPG	8,49	0,22	16%	7,13	9,85	5	
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		6,49	0,59	9,0	8	0	CVPG	6,43	0,047	16%	5,4	7,46	8	
Other					5	0							5	
								1x 4/1, 3x 4/179, 1x 4/195						
<b>(201) S-100</b>					5							4	3	75%
Samples and groups	[µg/L]													
<b>Sample A</b>		0,070	0,005	7,5	5							4	4	100%
Other					5	0							4	
								1x 2/98, 4x 4/60						
<b>Sample B</b>		0,073	0,002	3,0	5							4	3	75%
Other					5	0							4	
								1x 2/98, 4x 4/60						
<b>(206) Calcitonin</b>					7							5	5	100%
Samples and groups	[ng/L]													
<b>Sample A</b>		48,4	9,0	19	7							5	5	100%
Other					7	0							5	
								2x 1/24, 1x 4/29, 4x 4/60						
<b>Sample B</b>		10,0	1,9	19	7							5	5	100%
Other					7	0							5	
								2x 1/24, 1x 4/29, 4x 4/60						
<b>(207) Thyreoglobulin</b>					10							10	10	100%
Samples and groups	[µg/L]													
<b>Sample A</b>		8,46	3,6	42	10							10	10	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		11,3	0,44	3,9	5	0	CVPG	11,4	0,16	30%	7,98	14,9	5	
Other					5	0							5	
								2x 3/24, 2x 4/12, 1x 4/29						
<b>Sample B</b>		22,5	7,5	33	10							10	10	100%
(4) LIA (CLIA, CMIA, ILMA); (60) Roche		28,9	0,48	1,7	5	0	CVPG	28,1	0,65	30%	19,6	36,6	5	
Other					5	0							5	
								2x 3/24, 2x 4/12, 1x 4/29						
<b>(208) beta-2-microglobulin</b>					13							12	11	92%
Samples and groups	[mg/L]													
<b>Sample A</b>		5,26	0,58	11	13							12	12	100%
Other					13	0							12	
								2x 1/36, 1x 6/1, 3x 6/58, 4x 6/60, 1x 6/75, 1x 6/91, 1x 6/149						
<b>Sample B</b>		1,43	0,19	13	13							12	11	92%
Other					13	0							12	
								2x 1/36, 1x 6/1, 3x 6/58, 4x 6/60, 1x 6/75, 1x 6/91, 1x 6/149						
<b>(205) Chromogranin A</b>					2							2	2	100%
Samples and groups	[µg/L]													
<b>Sample A</b>		25,8	2,4	9,1	2							2	2	100%
Other					2	0							2	
								2x 3/24						
<b>Sample B</b>		34,7	3,9	11	2							2	2	100%
Other					2	0							2	
								2x 3/24						

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End of report

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