

EQA round: E23/24 - Hormones 2

Deadline: 19.7.2024

Setup: groups - M (measurement principle), R (manufacturer of kit); Czech Republic; 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			
(393) C-peptide	[pmol/L]				24							16	16	100
Sample A		254	54	21	24							16	16	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		240	16	6,5	7	0	CVPG	240	15	20%	192	288	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		307	11	3,5	9	0	CVPG	307	7,7	20%	245	369	9	
Other					8	0							0	
							3x 4/12, 1x 4/29, 3x 4/162, 1x 4/179							
Sample B		447	88	20	24							16	16	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		428	32	7,6	7	0	CVPG	428	31	20%	342	514	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		529	17	3,2	9	0	CVPG	529	11	20%	423	635	9	
Other					8	0							0	
							3x 4/12, 1x 4/29, 3x 4/162, 1x 4/179							
(193) Ferritin	[µg/L]				32							30	29	97
Sample A		43,4	11	26	32							30	30	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		40,5	3	7,3	9	0	CVPG	44,7	1,3	±16,8	27,9	61,5	9	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		51,3	6,8	13	11	0	CVPG	50,7	0,77	±16,8	33,9	67,5	11	
Other					12	0							10	
							3x 4/12, 1x 4/29, 3x 4/162, 1x 4/179, 2x 6/1, 2x 6/58							
Sample B		531	120	23	32							30	29	97
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		612	130	21	9	1	CVPG	655	21	24%	497	813	9	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		578	68	12	11	0	CVPG	569	7,4	24%	432	706	11	
Other					12	0							10	
							3x 4/12, 1x 4/29, 3x 4/162, 1x 4/179, 2x 6/1, 2x 6/58							
(321) FSH	[U/L]				24							24	24	100
Sample A		15,3	1,2	7,6	24							24	24	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		14,5	0,81	5,6	7	0	CVPG	14	0,18	15%	11,9	16,1	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		16,4	0,83	5,1	6	0	CVPG	16,8	0,42	15%	14,2	19,4	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		14,6	0,67	4,6	7	0	CVPG	14,3	0,072	15%	12,1	16,5	7	
Other					4	0							4	
							3x 4/162, 1x 4/179							
Sample B		59,5	5	8,3	24							24	24	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		57,7	3,2	5,6	7	0	CVPG	55,3	0,64	15%	47	63,6	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		63,2	3,4	5,4	6	0	CVPG	65,7	1,4	15%	55,8	75,6	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		55,9	1,9	3,3	7	0	CVPG	55,7	0,3	15%	47,3	64,1	7	
Other					4	0							4	
							3x 4/162, 1x 4/179							
(328) hGH	[mU/L]				5							5	5	100
Sample A					5							5	5	100
Other					5	0						5		
							1x 1/36, 2x 4/29, 2x 4/60							
Sample B					5							5	5	100
Other					5	0						5		
							1x 1/36, 2x 4/29, 2x 4/60							
(329) IGF-1	[µg/L]				7							7	7	100
Sample A					7							7	7	100
Other					7	0						7		
							2x 4/29, 3x 4/60, 2x 4/164							
Sample B					7							7	7	100
Other					7	0						7		
							2x 4/29, 3x 4/60, 2x 4/164							
(392) IGF-BP3	[µg/L]				3							3	3	100
Sample A					3							3	3	100
Other					3	0						3		
							2x 4/29, 1x 4/60							
Sample B					3							3	3	100
Other					3	0						3		
							2x 4/29, 1x 4/60							
(325) Insulin	[mU/L]				5							5	5	100
Sample A					5							5	5	100
Other					5	0						5		
							1x 4/1, 1x 4/12, 2x 4/60, 1x 4/179							
Sample B					5							5	5	100
Other					5	0						5		
							1x 4/1, 1x 4/12, 2x 4/60, 1x 4/179							

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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			
(326) Folate		[nmol/L]			32							32	31	97
Sample A					32							0		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		14,3	5,2	36	32							0		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		16	4,2	26	11	0	CVPG	21,1	2,3	27%	15,4	26,8	0	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		12,3	2,5	20	5	0	CVPG	17,3	3	27%	12,6	22	0	
Other					4	0							0	
							3x 4/162, 1x 4/179							
Sample B		47,8	4,4	9,3	32							32	31	97
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		45,3	0	0	11	0	CVPG	45,3	0,008	27%	33	57,6	11	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		53,9	0	0	5	0	CVPG	54	0,86	27%	39,4	68,6	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		45,4	0,053	0,12	12	0	CVPG	45,4	0,012	27%	33,1	57,7	12	
Other					4	1							4	
							3x 4/162, 1x 4/179							
(320) LH		[U/L]			23							23	23	100
Sample A					23							23	23	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		7,24	1,7	23	23									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		5,66	0,36	6,4	7	0	CVPG	5,59	0,069	15%	4,75	6,43	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		7,08	0,48	6,8	6	0	CVPG	7,37	0,17	15%	6,26	8,48	6	
Other					4	0							6	
							3x 4/162, 1x 4/179							
Sample B		24,7	3,7	15	23							23	23	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		21,8	0,89	4,1	7	0	CVPG	21,2	0,24	15%	18	24,4	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		22,7	0,36	1,6	6	0	CVPG	23	0,41	15%	19,5	26,5	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		29,7	0,67	2,3	6	0	CVPG	29,9	0,21	15%	25,4	34,4	6	
Other					4	0							4	
							3x 4/162, 1x 4/179							
(407) Parathyrin biointact (PTH 1-84)		[pmol/L]			8							8	8	100
Sample A					8							8	8	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		0,646	0,097	15	8	0	CVPG	0,622	0,037 ± 0,276	0,346	0,898	7		
Other		0,646	0,097	15	7	0						1		
					1	0	1x 4/164							
Sample B		4,84	0,68	14	8							8	8	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		4,86	0,66	14	7	0	CVPG	4,93	0,24	23%	3,79	6,07	7	
Other					1	0							1	
							1x 4/164							
(405) Parathyrin intact (PTH)		[pmol/L]			14							14	13	93
Sample A					14							14	13	93
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		0,466	0,081	17	14									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		0,455	0,082	18	6	0	CVPG	0,424	0,015 ± 0,276	0,148	0,7	6		
Other					8	0						8		
							3x 4/12, 1x 4/60, 3x 4/162, 1x 4/179							
Sample B		6,18	0,82	13	14							14	14	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		6,83	0,32	4,7	6	0	CVPG	6,75	0,17	23%	5,19	8,31	6	
Other					8	0							8	
							3x 4/12, 1x 4/60, 3x 4/162, 1x 4/179							
(322) Prolactin		[mU/L]			24							24	23	96
Sample A					24							24	23	96
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		176	25	14	24									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		180	12	6,6	8	0	CVPG	179	2,3	16%	150	208	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		158	3,7	2,4	6	0	CVPG	160	2,9	16%	134	186	6	
Other					4	0							6	
							3x 4/162, 1x 4/179							
Sample B		206	29	14	24							24	23	96
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		210	22	10	8	0	CVPG	208	2,8	16%	174	242	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		192	12	6,2	6	0	CVPG	197	4,6	16%	165	229	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		238	6,7	2,8	6	0	CVPG	236	1,5	16%	198	274	6	
Other					4	0							4	
							3x 4/162, 1x 4/179							
(390) Renin		[ng/L]			6							6	5	83
Sample A					6							6	5	83
Other					6	0						6		
							4x 4/164, 2x 4/183							
Sample B												6	5	83

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							AV	U _{AV}	D _{max}	LL	UL			
Other					6	0	4x 4/164, 2x 4/183					6		
(394) SHBG	[nmol/L]				15							15	15	100
Sample A		59,5	4,7	7,9	15							15	15	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		62	1,9	3,1	5	0	CVPG	58,3	1,5	20%	46,6	70	5	
Other					10	0	4x 4/12, 1x 4/29, 4x 4/60, 1x 4/162					10		
Sample B		51,4	4,5	8,7	15							15	15	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		54,5	1,7	3,1	5	0	CVPG	51,8	1	20%	41,4	62,2	5	
Other					10	0	4x 4/12, 1x 4/29, 4x 4/60, 1x 4/162					10		
(327) Vitamin B₁₂	[pmol/L]				28							28	26	93
Sample A		248	43	17	28							28	27	96
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		256	24	9,3	9	0	CVPG	251	6,6	20%	200	302	9	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		169	8,1	4,8	5	0	CVPG	167	3,9	20%	133	201	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		274	14	5,3	11	0	CVPG	271	2,3	20%	216	326	11	
Other					3	0	3x 4/162					3		
Sample B		339	52	15	28							28	27	96
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		344	50	15	9	0	CVPG	333	7,6	20%	266	400	9	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		252	1,8	0,71	5	0	CVPG	251	3,7	20%	200	302	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		368	21	5,7	11	0	CVPG	363	2,4	20%	290	436	11	
Other					3	0	3x 4/162					3		
(319) Vitamin B₁₂ (active)	[pmol/L]				6							0		
Sample A												0		
Other					6	0	4x 4/1, 1x 4/29, 1x 4/60					0		
Sample B												0		
Other					6	0	4x 4/1, 1x 4/29, 1x 4/60					0		