

EQA round: E13/23 - Hormones 1

Deadline: 25.7.2023

Setup: groups - measurement principle, 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			
(306) 17-OH-progesterone	[nmol/L]				3							3	3	100
Sample A												3	3	100
Other					3	0						3		
							1x 1/36, 1x 2/66, 1x 4/183							
Sample B												3	3	100
Other					3	0						3		
							1x 1/36, 1x 2/66, 1x 4/183							
(303) Aldosterone	[nmol/L]				7							6	6	100
Sample A												6	6	100
Other					7	0						6		
							1x 1/36, 1x 4/73, 4x 4/164, 1x 4/183							
Sample B												6	6	100
Other					7	0						6		
							1x 1/36, 1x 4/73, 4x 4/164, 1x 4/183							
(307) DHEA-S	[µmol/L]				17							17	17	100
Sample A		9,46	1,6	16	17							17	17	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		10,5	0,67	6,4	9	0	CVPG	9,9	0,13	21%	7,82	12	9	
Other					8	0							8	
							2x 4/1, 4x 4/12, 1x 4/162, 1x 4/179							
Sample B		8,24	1,3	16	17							17	17	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		9,1	0,39	4,3	9	0	CVPG	8,7	0,1	21%	6,87	10,6	9	
Other					8	0							8	
							2x 4/1, 4x 4/12, 1x 4/162, 1x 4/179							
(302) 17-beta-estradiol	[pmol/L]				29							29	28	97
Sample A		1460	170	12	29							29	28	97
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		1310	69	5,3	11	0	CVPG	1320	16	22%	1020	1620	11	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		1600	55	3,4	10	0	CVPG	1560	7,7	22%	1210	1910	10	
Other					8	0							8	
							4x 4/12, 3x 4/162, 1x 4/179							
Sample B		1120	110	9,4	29							29	28	97
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		1040	37	3,6	11	0	CVPG	1030	12	22%	803	1260	11	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		1200	37	3,1	10	0	CVPG	1180	6	22%	920	1440	10	
Other					8	0							8	
							4x 4/12, 3x 4/162, 1x 4/179							
(200) Ferritin	[µg/L]				47							44	44	100
Sample A		525	110	20	47							44	44	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		620	52	8,3	16	0	CVPG	635	11	24%	482	788	16	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		521	41	7,9	11	0	CVPG	533	6,9	24%	405	661	11	
Other					20	0							17	
							4x 4/12, 2x 4/29, 1x 4/149, 4x 4/162, 1x 4/179, 2x 6/1, 1x 6/46, 2x 6/58, 3x 6/60							
Sample B		566	110	20	47							44	44	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		661	46	7	16	0	CVPG	675	11	24%	513	837	16	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		581	61	11	11	0	CVPG	563	7,9	24%	427	699	11	
Other					20	0							17	
							4x 4/12, 2x 4/29, 1x 4/149, 4x 4/162, 1x 4/179, 2x 6/1, 1x 6/46, 2x 6/58, 3x 6/60							
(301) Cortisol	[nmol/L]				28							28	26	93
Sample A		672	78	12	28							28	26	93
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		586	30	5,2	8	0	CVPG	590	7,1	16%	495	685	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		710	32	4,4	11	0	CVPG	702	4,9	16%	589	815	11	
Other					9	1							9	
							1x 2/66, 4x 4/12, 3x 4/162, 1x 4/179							
Sample B		517	62	12	28							28	26	93
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		455	16	3,4	8	0	CVPG	461	5,6	16%	387	535	8	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		546	21	3,8	11	0	CVPG	542	3,6	16%	455	629	11	
Other					9	1							9	
							1x 2/66, 4x 4/12, 3x 4/162, 1x 4/179							
(304) Progesterone	[nmol/L]				30							30	30	100
Sample A		39,9	5,9	15	30							30	30	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		40,2	1,8	4,4	12	0	CVPG	40,1	0,64	20%	32	48,2	12	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		32,6	1,6	5	5	0	CVPG	30,5	0,86	20%	24,4	36,6	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		47,7	3,2	6,7	8	0	CVPG	46,3	0,3	20%	37	55,6	8	

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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					5	0	4x 4/162, 1x 4/179					5		
Sample B		57,6	7,7	13	30							30	30	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		58,3	3,7	6,3	12	0	CVPG	58,3	0,96	20%	46,6	70	12	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		47,4	1,1	2,4	5	0	CVPG	44,7	1,1	20%	35,7	53,7	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		66,4	3,4	5,1	8	0	CVPG	66,6	0,4	20%	53,2	80	8	
Other					5	0	4x 4/162, 1x 4/179					5		
(121) Total T3	[nmol/L]				28							25	25	100
Sample A		5,03	0,65	13	28							25	25	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		4,6	0,53	12	11	0	CVPG	4,62	0,22	19%	3,74	5,5	11	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		5,51	0,29	5,3	8	0	CVPG	5,62	0,1	19%	4,55	6,69	8	
Other					9	0	2x 4/12, 4x 4/162, 1x 4/177, 2x 4/179					6		
Sample B		2,23	0,32	14	28							25	25	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,01	0,095	4,7	11	0	CVPG	2,04	0,05	19%	1,65	2,43	11	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		2,54	0,089	3,5	8	0	CVPG	2,58	0,053	19%	2,08	3,08	8	
Other					9	0	2x 4/12, 4x 4/162, 1x 4/177, 2x 4/179					6		
(125) Free T3	[pmol/L]				47							46	43	93
Sample A		15,2	2,8	18	47							46	44	96
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		13,7	0,98	7,2	19	0	CVPG	13,6	0,15	15%	11,5	15,7	19	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		12,1	0,96	7,9	6	0	CVPG	12,3	0,26	15%	10,4	14,2	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		18,2	0,5	2,8	14	0	CVPG	18,3	0,057	15%	15,5	21,1	14	
Other					8	0	1x 4/29, 4x 4/162, 1x 4/177, 2x 4/179					7		
Sample B		6,09	0,81	13	47							46	45	98
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		5,47	0,41	7,5	19	0	CVPG	5,46	0,054	15%	4,64	6,28	19	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		5,6	0,15	2,6	6	0	CVPG	5,45	0,097	15%	4,63	6,27	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		6,71	0,17	2,6	14	0	CVPG	6,76	0,027	15%	5,74	7,78	14	
Other					8	0	1x 4/29, 4x 4/162, 1x 4/177, 2x 4/179					7		
(122) Total T4	[nmol/L]				28							27	27	100
Sample A		128	10	8	28							27	27	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		124	4,8	3,9	11	0	CVPG	123	3,1	17%	102	144	11	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		124	9,3	7,5	8	0	CVPG	123	3,1	17%	102	144	8	
Other					9	0	2x 4/12, 4x 4/162, 1x 4/177, 2x 4/179					8		
Sample B		91,6	5,4	5,9	28							27	27	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		88,7	2,8	3,2	11	0	CVPG	88,6	2,5	17%	73,5	104	11	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		90,3	3,8	4,2	8	0	CVPG	90,1	2,1	17%	74,7	106	8	
Other					9	0	2x 4/12, 4x 4/162, 1x 4/177, 2x 4/179					8		
(124) Free T4	[pmol/L]				58							57	57	100
Sample A		19,3	3,7	19	58							57	57	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		16,4	0,63	3,8	26	0	CVPG	16,5	0,15	13%	14,3	18,7	26	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		18,1	1,2	6,6	7	0	CVPG	18,5	0,32	13%	16	21	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		23,7	0,86	3,6	16	0	CVPG	23,8	0,089	13%	20,7	26,9	16	
Other					9	0	2x 4/29, 1x 4/149, 4x 4/162, 1x 4/177, 1x 4/179					8		
Sample B		13,8	2,2	16	58							57	57	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		12,3	0,61	5	26	0	CVPG	12,4	0,11	13%	10,7	14,1	26	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		12,8	0,36	2,8	7	0	CVPG	12,6	0,24	13%	10,9	14,3	7	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		16,4	0,61	3,7	16	0	CVPG	16,5	0,065	13%	14,3	18,7	16	
Other					9	0	2x 4/29, 1x 4/149, 4x 4/162, 1x 4/177, 1x 4/179					8		
(305) Testosterone	[nmol/L]				32							31	29	94
Sample A		17,1	1,3	7,3	32							31	31	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		17,6	0,62	3,5	13	0	CVPG	17,4	0,23	22%	13,5	21,3	13	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		12,4	0,15	1,2	5	0	CVPG	12,5	0,27	22%	9,75	15,3	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		17,2	0,37	2,2	9	0	CVPG	17	0,11	22%	13,2	20,8	9	
Other					5	0	1x 3/200, 3x 4/162, 1x 4/179					4		

