

EQA round: E24/23 - Hormones 2

Deadline: 9.10.2023

Setup: groups - measurement principle, 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			
(393) C-peptide	[pmol/L]				12							10	9	90
Sample A		275	47	17	12							10	9	90
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		297	20	6,8	6	0	CVPG	296	4	20%	236	356	6	
Other					6	0							4	
							1x 1/36, 4x 4/1, 1x 4/179							
Sample B		371	58	16	12							10	9	90
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		409	13	3,3	6	0	CVPG	406	5,1	20%	324	488	6	
Other					6	0							4	
							1x 1/36, 4x 4/1, 1x 4/179							
(193) Ferritin	[µg/L]				22							22	21	95
Sample A		42,9	11	24	22							22	22	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		43,4	2,8	6,5	7	0	CVPG	42,5	0,92	±16,8	25,7	59,3	7	
Other					15	0							15	
							4x 4/12, 4x 4/60, 1x 4/162, 1x 4/179, 1x 6/1, 2x 6/58, 2x 6/60							
Sample B		305	63	21	22							22	21	95
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		343	32	9,2	7	0	CVPG	359	6,6	24%	272	446	7	
Other					15	0							15	
							4x 4/12, 4x 4/60, 1x 4/162, 1x 4/179, 1x 6/1, 2x 6/58, 2x 6/60							
(321) FSH	[U/L]				19							19	18	95
Sample A		14,5	1,2	8,4	19							19	18	95
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		14,3	0,8	5,6	5	0	CVPG	15,8	0,31	15%	13,4	18,2	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		14,2	1,4	10	9	0	CVPG	14,3	0,094	15%	12,1	16,5	9	
Other					5	0							5	
							1x 3/25, 4x 4/1							
Sample B		4,85	0,34	7	19							19	19	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		5,04	0,36	7,1	5	0	CVPG	5,34	0,1	15%	4,53	6,15	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		4,75	0,38	8	9	0	CVPG	4,77	0,029	15%	4,05	5,49	9	
Other					5	0							5	
							1x 3/25, 4x 4/1							
(328) hGH	[mU/L]				7							7	7	100
Sample A					7							7	7	100
Other					7	0							7	
							1x 1/36, 3x 4/12, 2x 4/29, 1x 4/60							
Sample B					7							7	7	100
Other					7	0							7	
							1x 1/36, 3x 4/12, 2x 4/29, 1x 4/60							
(329) IGF-1	[µg/L]				5							5	4	80
Sample A					5							5	4	80
Other					5	0							5	
							1x 1/36, 3x 4/29, 1x 4/60							
Sample B					5							5	5	100
Other					5	0							5	
							1x 1/36, 3x 4/29, 1x 4/60							
(392) IGF-BP3	[µg/L]				2							1	1	100
Sample A					2							1	1	100
Other					2	0							1	
							1x 1/183, 1x 4/29							
Sample B					2							1	1	100
Other					2	0							1	
							1x 1/183, 1x 4/29							
(325) Insulin	[mU/L]				11							10	10	100
Sample A					11							10	10	100
Other					11	0							10	
							1x 1/36, 4x 4/1, 2x 4/12, 3x 4/60, 1x 4/179							
Sample B					11							10	10	100
Other					11	0							10	
							1x 1/36, 4x 4/1, 2x 4/12, 3x 4/60, 1x 4/179							
(326) Folate	[nmol/L]				20							20	18	90
Sample A		19,7	5,3	27	20							20	20	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		24,2	1,8	7,5	6	0	CVPG	21,6	1,3	62%	8,2	35	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		17,6	3,6	20	5	0	CVPG	16,3	1,5	62%	6,19	26,5	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		17,1	6,2	36	8	0	CVPG	16,4	0,79	62%	6,23	26,6	8	

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							AV	U _{AV}	D _{max}	LL	UL			
Other					1	0	1x 4/179					1		
Sample B		48,6	5,3	11	20							20	18	90
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		45,3	0	0	6	0	CVPG	45,4	0,015	27%	33,1	57,7	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		54,2	0,96	1,8	5	0	CVPG	54,4	0,62	27%	39,7	69,1	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		45,4	0,059	0,13	8	0	CVPG	45,4	0,005	27%	33,1	57,7	8	
Other					1	0	1x 4/179					1		
(320) LH	[U/L]				19							19	19	100
Sample A		7,73	1,9	24	19							19	19	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		6,7	0,68	10	5	0	CVPG	7,12	0,15	15%	6,05	8,19	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		9,28	0,33	3,5	9	0	CVPG	9,69	0,074	15%	8,23	11,2	9	
Other					5	0	1x 3/25, 4x 4/1					5		
Sample B		21,4	4,5	21	19							19	19	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		17,4	0,63	3,6	5	0	CVPG	17,4	0,32	15%	14,7	20,1	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		25	1,2	4,8	9	0	CVPG	25,9	0,18	15%	22	29,8	9	
Other					5	0	1x 3/25, 4x 4/1					5		
(405) Parathyrin intact (PTH)	[pmol/L]				21							21	20	95
Sample A		0,459	0,26	57	21							21	20	95
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		0,15	0,059	40	6	0	CVPG	0,198	0,027 ± 0,276		0	0,474	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		0,627	0,16	26	10	0	CVPG	0,655	0,01 ± 0,276	0,379	0,931	10		
Other					5	0	3x 4/1, 1x 4/29, 1x 4/179					5		
Sample B		6,81	1,7	25	21							21	20	95
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		6,58	0,6	9,2	6	0	CVPG	6,75	0,21	23%	5,19	8,31	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		5,83	0,61	11	10	0	CVPG	5,42	0,048	23%	4,17	6,67	10	
Other					5	0	3x 4/1, 1x 4/29, 1x 4/179					5		
(322) Prolactin	[mU/L]				18							17	16	94
Sample A		184	28	15	18							17	16	94
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		156	3,9	2,5	5	0	CVPG	158	3,3	16%	132	184	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		205	7,6	3,7	8	1	CVPG	202	1,2	16%	169	235	8	
Other					5	0	1x 1/36, 1x 3/25, 2x 4/1, 1x 4/179					4		
Sample B		512	66	13	18							17	16	94
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		447	34	7,6	5	0	CVPG	458	9	16%	384	532	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		558	19	3,5	8	1	CVPG	550	3,5	16%	462	638	8	
Other					5	0	1x 1/36, 1x 3/25, 2x 4/1, 1x 4/179					4		
(390) Renin	[ng/L]				3							2	1	50
Sample A					3							2	1	50
Other					3	0	1x 1/185, 1x 2/66, 1x 4/164					2		
Sample B					3							2	2	100
Other					3	0	1x 1/185, 1x 2/66, 1x 4/164					2		
(394) SHBG	[nmol/L]				8							8	8	100
Sample A		61	2,8	4,7	8							8	8	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		61	2,8	4,7	5	0	CVPG	59	0,42	20%	47,2	70,8	5	
Other					3	0	1x 4/1, 2x 4/12					3		
Sample B		34	4,2	12	8							8	8	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		35,1	2,5	7,2	5	0	CVPG	33,5	0,25	20%	26,8	40,2	5	
Other					3	0	1x 4/1, 2x 4/12					3		
(327) Vitamin B₁₂	[pmol/L]				20							20	19	95
Sample A		239	52	22	20							20	19	95
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		243	8,9	3,7	6	0	CVPG	254	4,6	20%	203	305	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		169	12	6,9	5	0	CVPG	164	6,2	20%	131	197	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		281	34	12	8	0	CVPG	273	2,4	20%	218	328	8	

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							AV	U _{AV}	D _{max}	LL	UL			
Other					1	0	1x 4/179					1		
Sample B		332	58	18	20							20	20	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		337	13	3,7	6	0	CVPG	336	6	20%	268	404	6	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		249	15	6	5	0	CVPG	246	7,2	20%	196	296	5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		379	39	10	8	0	CVPG	368	2,6	20%	294	442	8	
Other					1	0	1x 4/179					1		
(319) Vitamin B₁₂ (active)	[pmol/L]				7							7	7	100
Sample A												7	7	100
Other					7	0	4x 4/1, 3x 4/60					7		
Sample B												7	7	100
Other					7	0	4x 4/1, 3x 4/60					7		