

## Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

Filter: Czech Republic, minimal size of groups n = 5

## EQA round: E23/18 - Hormones 2

Dead line: 07.08.2018

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												
		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>(193) Ferritin</b>					28							25	23	92%
Samples and groups	[µg/L]													
<b>Sample A</b>		141	26	18	28							25	23	92%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		171	12	6,9	6	0	CVPG	176	3,9	24%	133	219	6	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		116	9,9	8,5	5	0	CVPG	117	3,5	24%	88,9	146	5	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		151	16	10	6	0	CVPG	159	2,0	24%	120	198	6	
Other					11	0							8	
								3x 4/179, 2x 6/1, 1x 6/12, 2x 6/58, 2x 6/60, 1x 6/179						
<b>Sample B</b>		116	21	18	28							25	24	96%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		125	8,5	6,8	6	0	CVPG	127	3,4	24%	96,5	158	6	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		86,6	6,6	7,6	5	0	CVPG	94,3	4,0	24%	71,6	117	5	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		135	4,7	3,5	6	0	CVPG	134	2,1	24%	101	167	6	
Other					11	0							8	
								3x 4/179, 2x 6/1, 1x 6/12, 2x 6/58, 2x 6/60, 1x 6/179						
<b>(320) LH</b>					24							24	23	96%
Samples and groups	[U/L]													
<b>Sample A</b>		11,1	2,1	19	24							24	23	96%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		9,25	0,66	7,1	6	0	CVPG	9,22	0,15	15%	7,83	10,7	6	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		10,1	0,36	3,5	7	0	CVPG	10,5	0,18	15%	8,92	12,1	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		13,5	0,49	3,6	7	0	CVPG	13,4	0,081	15%	11,3	15,5	7	
Other					4	0							4	
								1x 3/25, 3x 4/179						
<b>Sample B</b>		121	18	15	24							24	23	96%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		119	7,4	6,2	6	0	CVPG	114	2,8	15%	96,9	132	6	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		102	4,4	4,4	7	0	CVPG	101	1,8	15%	85,8	117	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		131	6,7	5,1	7	0	CVPG	130	0,76	15%	110	150	7	
Other					4	0							4	
								1x 3/25, 3x 4/179						
<b>(321) FSH</b>					24							24	22	92%
Samples and groups	[U/L]													
<b>Sample A</b>		81,8	16	20	24							24	22	92%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		81,5	3,6	4,5	6	0	CVPG	82,9	1,3	15%	70,4	95,4	6	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		64,2	5,8	9,0	7	0	CVPG	66	1,4	15%	56,1	75,9	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		84,4	0,74	0,88	7	0	CVPG	83	0,53	15%	70,5	95,5	7	
Other					4	0							4	
								4x 4/179						
<b>Sample B</b>		16,0	2,6	16	24							24	23	96%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		16,2	0,44	2,7	6	0	CVPG	16,1	0,23	15%	13,6	18,6	6	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		13,1	1,3	10	7	0	CVPG	13,6	0,34	15%	11,5	15,7	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		16,8	0,22	1,3	7	0	CVPG	16,5	0,11	15%	14	19	7	
Other					4	0							4	
								4x 4/179						
<b>(322) Prolactin</b>					26							26	26	100%
Samples and groups	[mU/L]													
<b>Sample A</b>		265	35	13	26							26	26	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		265	7,4	2,8	8	0	CVPG	265	4,0	16%	222	308	8	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		249	34	14	7	0	CVPG	248	5,9	16%	208	288	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		308	6,2	2,0	7	0	CVPG	299	2,0	16%	251	347	7	
Other					4	0							4	
								1x 4/29, 3x 4/179						
<b>Sample B</b>		402	36	9,0	26							26	26	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		407	15	3,7	8	0	CVPG	408	6,2	16%	342	474	8	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		378	31	8,3	7	0	CVPG	382	8,7	16%	320	444	7	

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Dead line: 07.08.2018

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>(322) Prolactin</b>													26	26	100%
Samples and groups	[mU/L]				26										
<b>Sample B</b>		402	36	9,0	26								26	26	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		435	8,5	1,9	7	0	CVPG	427	3,0	16%	358	496	7		
Other					4	0							4		
								1x 4/29, 3x 4/179							
<b>(325) Insulin</b>					8								8	7	88%
Samples and groups	[mU/L]				8										
<b>Sample A</b>		29,1	7,9	27	8								8	7	88%
Other					8	0							8		
								3x 4/1, 2x 4/12, 2x 4/60, 1x 4/179							
<b>Sample B</b>		78,5	21	27	8								8	8	100%
Other					8	0							8		
								3x 4/1, 2x 4/12, 2x 4/60, 1x 4/179							
<b>(326) Folate</b>					27								27	27	100%
Samples and groups	[nmol/L]				27										
<b>Sample A</b>		13,1	2,8	21	27								27	27	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		14,7	1,3	8,6	7	0	CVPG	14,4	0,26	27%	10,5	18,3	7		
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		15,1	0,99	6,6	8	0	CVPG	15,3	0,22	27%	11,1	19,5	8		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		10,3	0,59	5,8	9	0	CVPG	10,1	0,13	27%	7,37	12,9	9		
Other					3	0							3		
								1x 4/149, 2x 4/179							
<b>Sample B</b>		7,88	1,6	20	27								27	27	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		9,25	0,82	8,8	7	0	CVPG	9,2	0,22	27%	6,71	11,7	7		
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		8,37	0,49	5,8	8	0	CVPG	8,27	0,16	27%	6,03	10,6	8		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		6,35	0,52	8,2	9	0	CVPG	5,93	0,11	27%	4,32	7,54	9		
Other					3	0							3		
								1x 4/149, 2x 4/179							
<b>(327) Vitamin B12</b>					23								23	23	100%
Samples and groups	[pmol/L]				23										
<b>Sample A</b>		225	44	19	23								23	23	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		234	18	7,6	6	0	CVPG	234	5,6	20%	187	281	6		
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		183	27	15	8	0	CVPG	180	4,3	20%	144	216	8		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		269	31	12	7	0	CVPG	260	2,2	20%	208	312	7		
Other					2	0							2		
								1x 4/149, 1x 4/179							
<b>Sample B</b>		321	53	17	23								23	23	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		329	27	8,3	6	0	CVPG	331	5,6	20%	264	398	6		
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		270	15	5,5	8	0	CVPG	267	5,0	20%	213	321	8		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		375	30	8,1	7	0	CVPG	365	2,7	20%	292	438	7		
Other					2	0							2		
								1x 4/149, 1x 4/179							
<b>(328) hGH</b>					5								4	4	100%
Samples and groups	[mU/L]				5										
<b>Sample A</b>		9,65	1,6	16	5								4	4	100%
Other					5	0							4		
								1x 3/25, 2x 4/12, 2x 4/29							
<b>Sample B</b>		23,7	3,6	15	5								4	4	100%
Other					5	0							4		
								1x 3/25, 2x 4/12, 2x 4/29							
<b>(329) IGF-1</b>					8								8	7	88%
Samples and groups	[µg/L]				8										
<b>Sample A</b>		184	53	29	8								8	7	88%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (DPC)		154	8,2	5,3	5	0	CVPG	147	3,7	22%	114	180	5		
Other					3	0							3		
								3x 4/164							
<b>Sample B</b>		234	95	41	8								8	7	88%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (DPC)		175	7,4	4,2	5	0	CVPG	173	4,4	22%	134	212	5		
Other					3	0							3		
								3x 4/164							
<b>(390) Renin</b>					6								6	5	83%
Samples and groups	[ng/L]				6										
<b>Sample A</b>		39,1	2,2	5,7	6								6	5	83%
(4) LIA (CLIA, CMIA, ECLIA); (164) DiaSorin		39,5	1,6	4,0	5	0	CVPG	37	0,62	20%	29,6	44,4	5		

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## EQA round: E23/18 - Hormones 2

Dead line: 07.08.2018

Test	[unit]	RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	Comparability						N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>
							AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL				
<b>(390) Renin</b>					6								6	5	83%
Samples and groups	[ng/L]														
<b>Sample A</b>		39,1	2,2	5,7	6								6	5	83%
Other					1	0							1		
															1x 1/185
<b>Sample B</b>		34,0	5,5	16	6								6	5	83%
(4) LIA (CLIA, CMIA, ECLIA); (164) DiaSorin		35,4	3,4	9,6	5	0	CVPG	32,2	0,62	20%	25,7	38,7	5		
Other					1	0							1		
															1x 1/185
<b>(392) IGF-BP3</b>					4								4	4	100%
Samples and groups	[µg/L]														
<b>Sample A</b>		4480	330	7,3	4								4	4	100%
Other					4	0							4		
															4x 4/29
<b>Sample B</b>		4320	200	4,7	4								4	4	100%
Other					4	0							4		
															4x 4/29
<b>(393) C-peptide</b>					21								14	14	100%
Samples and groups	[pmol/L]														
<b>Sample A</b>		349	65	19	21								14	14	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		317	5,2	1,6	6	0	CVPG	312	12	20%	249	375	6		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		399	17	4,3	8	0	CVPG	397	10	20%	317	477	8		
Other					7	0							0		
															1x 3/25, 1x 4/29, 2x 4/164, 3x 4/179
<b>Sample B</b>		281	60	22	21								14	14	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		258	5,2	2,0	6	0	CVPG	257	5,8	20%	205	309	6		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		332	13	4,0	8	0	CVPG	331	8,4	20%	264	398	8		
Other					7	0							0		
															1x 3/25, 1x 4/29, 2x 4/164, 3x 4/179
<b>(394) SHBG</b>					16								15	15	100%
Samples and groups	[nmol/L]														
<b>Sample A</b>		119	17	14	16								15	15	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		138	5,0	3,7	5	0	CVPG	131	1,6	20%	104	158	5		
Other					11	0							10		
															1x 3/25, 4x 4/1, 4x 4/12, 2x 4/29
<b>Sample B</b>		30,0	2,7	9,2	16								15	15	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		32,9	0,074	0,23	5	0	CVPG	31,9	0,29	20%	25,5	38,3	5		
Other					11	0							10		
															1x 3/25, 4x 4/1, 4x 4/12, 2x 4/29
<b>(405) Parathyroid hormone (PTH)</b>					15								15	13	87%
Samples and groups	[pmol/L]														
<b>Sample A</b>		2,91	0,69	24	15								15	13	87%
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		2,47	0,096	3,9	5	0	CVPG	2,55	0,12	23%	1,96	3,14	5		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		2,68	0,41	15	5	0	CVPG	2,46	0,039	23%	1,89	3,03	5		
Other					5	0							5		
															4x 4/1, 1x 4/179
<b>Sample B</b>		6,48	1,4	22	15								15	14	93%
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		5,89	0,28	4,8	5	0	CVPG	6,12	0,25	23%	4,71	7,53	5		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		5,56	0,23	4,1	5	0	CVPG	5,21	0,058	23%	4,01	6,41	5		
Other					5	0							5		
															4x 4/1, 1x 4/179
<b>(407) Parathyroid hormone (PTH 1-84)</b>					7								7	7	100%
Samples and groups	[pmol/L]														
<b>Sample A</b>		2,15	0,79	37	7								7	7	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		2,53	0,22	8,8	5	0	CVPG	2,53	0,63	17%	2,09	2,97	5		
Other					2	0							2		
															2x 4/164
<b>Sample B</b>		4,83	1,6	34	7								7	7	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		5,67	0,40	7,0	5	0	CVPG	5,67	1,1	17%	4,7	6,64	5		
Other					2	0							2		
															2x 4/164

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End of report

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