

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

Deadline: 04.08.2020

EQA round: E13/20 - Hormones 1

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 the 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 _{AV} = expanded uncertainty of the assigned value (k = 2)	

Test	[unit]	Comparability						Traceability																	
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}			
(121) Total T3					28							28	28	100%							0				
Samples and groups	[nmol/L]																								
Sample A		2,57	0,34	13	28							28	28	100%							0				
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,39	0,15	6,2	10	0	CVPG	2,38	0,11	15%	2,02	2,74	10												
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		2,75	0,07	2,7	5	0	CVPG	2,86	0,050	15%	2,43	3,29	5												
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		2,90	0,22	7,7	9	0	CVPG	2,86	0,12	15%	2,43	3,29	9												
Other					4	0							4												
								2x 4/12, 2x 4/29																	
Sample B		4,04	0,48	12	28							28	28	100%							0				
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		3,78	0,21	5,6	10	0	CVPG	3,81	0,15	15%	3,23	4,39	10												
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		4,31	0,16	3,8	5	0	CVPG	4,42	0,095	15%	3,75	5,09	5												
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		4,44	0,22	5,0	9	0	CVPG	4,42	0,17	15%	3,75	5,09	9												
Other					4	0							4												
								2x 4/12, 2x 4/29																	
(122) Total T4					27							27	26	96%							27	27	100%		
Samples and groups	[nmol/L]																								
Sample A		101	5,0	5,0	27							27	27	100%	CRV	103,6	1,2	17%	85,9	122	27	27	100%		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		99,6	5,0	5,0	10	0	CVPG	98,4	3,3	13%	85,6	112	10											10	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		105	9,3	8,8	5	0	CVPG	101	2,9	13%	87,8	115	5											5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		101	2,8	2,8	8	0	CVPG	100	2,5	13%	87	113	8											8	
Other					4	0							4												4
								2x 4/12, 2x 4/29																	
Sample B		181	8,8	4,9	27							27	26	96%	CRV	187,1	1,9	17%	155	219	27	27	100%		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		181	8,2	4,5	10	0	CVPG	180	7,1	13%	156	204	10											10	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		182	13	6,9	5	0	CVPG	178	4,0	13%	154	202	5											5	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		183	8,5	4,7	8	0	CVPG	184	4,2	13%	160	208	8											8	
Other					4	0							4												4
								2x 4/12, 2x 4/29																	
(123) TSH					53							53	53	100%							0				
Samples and groups	[mU/L]																								
Sample A		13,6	1,8	13	53							53	53	100%							0				
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		11,9	0,45	3,8	20	0	CVPG	12	0,090	14%	10,3	13,7	20												
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		14,3	0,38	2,6	9	0	CVPG	14,2	0,13	14%	12,2	16,2	9												

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Test	[unit]	Comparability						Traceability															
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	
(123) TSH	[mU/L]				53							53	53	100%									0
Samples and groups																							
Sample A		13,6	1,8	13	53							53	53	100%								0	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		16,0	0,33	2,1	10	0	CVPG	15,6	0,061	14%	13,4	17,8		10									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		13,7	0,44	3,2	9	0	CVPG	14	0,14	14%	12	16		9									
Other					5	0								5									
								4x 4/29, 1x 4/149															
Sample B		13,7	1,8	13	53								53	53	100%							0	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		12,0	0,43	3,6	20	0	CVPG	11,9	0,097	14%	10,2	13,6		20									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		14,2	0,25	1,8	9	0	CVPG	14,3	0,15	14%	12,2	16,4		9									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		16,0	0,38	2,4	10	0	CVPG	15,6	0,062	14%	13,4	17,8		10									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		14,1	0,24	1,7	9	0	CVPG	14,2	0,14	14%	12,2	16,2		9									
Other					5	0								5									
								4x 4/29, 1x 4/149															
(124) Free T4	[pmol/L]				53								53	53	100%							0	
Samples and groups																							
Sample A		17,4	3,2	18	53								53	53	100%							0	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		14,8	0,97	6,5	20	0	CVPG	14,9	0,16	13%	12,9	16,9		20									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		15,8	0,59	3,8	9	0	CVPG	16,2	0,19	13%	14	18,4		9									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		20,6	0,73	3,6	10	0	CVPG	20,2	0,099	13%	17,5	22,9		10									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		19,6	0,54	2,8	9	0	CVPG	19,6	0,21	13%	17	22,2		9									
Other					5	0								5									
								4x 4/29, 1x 4/149															
Sample B		35,7	8,3	23	53									53	53	100%						0	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		27,3	2,0	7,3	20	0	CVPG	27,7	0,37	13%	24	31,4		20									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		37,9	1,6	4,2	9	0	CVPG	37,1	0,48	13%	32,2	42		9									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		44,4	2,7	6,2	10	0	CVPG	44,1	0,23	13%	38,3	49,9		10									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		39,2	0,96	2,4	9	0	CVPG	39,4	0,48	13%	34,2	44,6		9									
Other					5	0								5									
								4x 4/29, 1x 4/149															
(125) Free T3	[pmol/L]				45								45	41	91%							0	
Samples and groups																							
Sample A		8,03	1,3	16	45									45	44	98%						0	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		7,16	0,48	6,7	16	0	CVPG	7,3	0,082	15%	6,2	8,4		16									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		6,76	0,36	5,3	7	0	CVPG	7,03	0,12	15%	5,97	8,09		7									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		9,06	0,36	4,0	10	0	CVPG	9,17	0,034	15%	7,79	10,6		10									
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		8,89	0,32	3,6	9	0	CVPG	8,57	0,084	15%	7,28	9,86		9									

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Test	[unit]	Comparability										Traceability												
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}		
(125) Free T3					45							45	41	91%							0			
Samples and groups	[pmol/L]																							
Sample A		8,03	1,3	16	45							45	44	98%							0			
Other					3	0						3												
Sample B		14,5	2,6	18	45							45	42	93%							0			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		13,1	1,2	9,3	16	0	CVPG	13,3	0,18	15%	11,3	15,3		16										
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		11,9	0,82	6,9	7	0	CVPG	12,4	0,22	15%	10,5	14,3		7										
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		17,7	0,63	3,6	10	0	CVPG	17,9	0,065	15%	15,2	20,6		10										
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		15,5	0,36	2,3	9	0	CVPG	14,7	0,15	15%	12,4	17		9										
Other					3	0								3										
(200) Ferritin					42							39	34	87%							0			
Samples and groups	[µg/L]																							
Sample A		189	35	18	42							39	39	100%							0			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		223	15	6,9	12	0	CVPG	225	3,5	24%	171	279		12										
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		151	6,7	4,4	6	0	CVPG	155	3,4	24%	117	193		6										
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		182	8,3	4,6	7	0	CVPG	191	3,7	24%	145	237		7										
Other					17	0								14										
Sample B		44,2	13	29	42							39	34	87%							0			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		41,0	8,4	20	12	0	CVPG	42,5	2,4	24%	32,3	52,7		12										
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		35,5	3,7	10	6	0	CVPG	37,9	2,3	24%	28,8	47		6										
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		41,9	8,4	20	7	0	CVPG	42,7	2,1	24%	32,4	53		7										
Other					17	0								14										
(301) Cortisol					24							24	23	96%							24	23	96%	
Samples and groups	[nmol/L]																							
Sample A		482	59	12	24							24	23	96% CRV	479,6	4,8	22%	374	586		24	24	100%	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		440	32	7,3	6	0	CVPG	440	7,1	16%	369	511		6							6			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		479	43	9,0	8	0	CVPG	479	3,8	16%	402	556		8							8			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		562	13	2,4	5	0	CVPG	556	11	16%	467	645		5							5			
Other					5	0								5								5		
Sample B		360	37	10	24							24	23	96% CRV	355,5	4,2	22%	277	434		24	23	96%	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		344	11	3,3	6	0	CVPG	333	4,9	16%	279	387		6							6			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		359	28	7,8	8	0	CVPG	360	2,9	16%	302	418		8							8			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		410	7,4	1,8	5	0	CVPG	410	7,5	16%	344	476		5							5			

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Test	[unit]	Comparability										Traceability											
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}	
(301) Cortisol	[nmol/L]				24							24	23	96%							24	23	96%
Samples and groups																							
Sample B		360	37	10	24						24	23	96%	CRV	355,5	4,2	22%	277	434	24	23	96%	
Other					5	0					5									5			
							4x 4/12, 1x 4/29																
														4x 4/12, 1x 4/29									
(302) 17-beta-estradiol	[pmol/L]				26							25	25	100%							26	25	96%
Samples and groups																							
Sample A		406	32	8,0	26						25	25	100%	CRV	394,2	4,1	30%	275	513	26	26	100%	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		410	8,2	2,0	9	0	CVPG	413	7,4	22%	322	504	9							9			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		424	34	8,1	7	0	CVPG	415	3,3	22%	323	507	7							7			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		408	18	4,4	5	0	CVPG	405	7,5	22%	315	495	5							5			
Other					5	0							4							5			
							3x 4/12, 1x 4/29, 1x 4/999																
														3x 4/12, 1x 4/29, 1x 4/999									
Sample B		245	26	10	26						25	25	100%	CRV	229,2	2,3	30%	160	298	26	25	96%	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		267	13	4,7	9	0	CVPG	270	6,1	22%	210	330	9							9			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		238	21	8,7	7	0	CVPG	245	2,8	22%	191	299	7							7			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		243	19	7,6	5	0	CVPG	238	6,5	22%	185	291	5							5			
Other					5	0							4							5			
							3x 4/12, 1x 4/29, 1x 4/999																
														3x 4/12, 1x 4/29, 1x 4/999									
(303) Aldosterone	[nmol/L]				6							6	6	100%							0		
Samples and groups																							
Sample A		0,490	0,05	12	6						6	6	100%							0			
Other					6	0					6									6			
							2x 1/218, 3x 4/164, 1x 4/183																
Sample B		0,512	0,06	13	6						6	6	100%							0			
Other					6	0					6									6			
							2x 1/218, 3x 4/164, 1x 4/183																
(304) Progesterone	[nmol/L]				26							26	24	92%							26	26	100%
Samples and groups																							
Sample A		19,3	3,1	16	26						26	26	100%	CRV	19,47	0,19	26%	14,4	24,6	26	26	100%	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		19,0	1,4	7,6	10	0	CVPG	18,6	0,38	20%	14,8	22,4	10							10			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		23,4	1,1	4,8	6	0	CVPG	22,9	0,16	20%	18,3	27,5	6							6			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		16,6	0,07	0,45	5	0	CVPG	15,4	0,34	20%	12,3	18,5	5							5			
Other					5	0							5							5			
							1x 3/25, 3x 4/12, 1x 4/29																
														1x 3/25, 3x 4/12, 1x 4/29									
Sample B		5,64	0,48	8,6	26						26	24	92%	CRV	5,11	0,050	26%	3,78	6,44	26	26	100%	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		5,46	0,43	7,9	10	0	CVPG	5,22	0,13	20%	4,17	6,27	10							10			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		6,04	0,16	2,6	6	0	CVPG	6,06	0,065	20%	4,84	7,28	6							6			
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		5,75	0,50	8,8	5	0	CVPG	5,3	0,14	20%	4,24	6,36	5							5			
Other					5	0							5							5			
							1x 3/25, 3x 4/12, 1x 4/29																
														1x 3/25, 3x 4/12, 1x 4/29									

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(305) Testosterone	[nmol/L]				28							27	27	100%							28	21	75%
Samples and groups																							
Sample A		34,0	4,6	14	28							27	27	100%	CRV	31,06	0,37	30%	21,7	40,4	28	26	93%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		37,9	2,5	6,5	9	0	CVPG	37,2	0,68	22%	29	45,4	9								9		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		34,9	2,2	6,4	7	0	CVPG	34,2	0,24	22%	26,6	41,8	7								7		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		33,1	2,1	6,2	5	0	CVPG	32,2	0,59	22%	25,1	39,3	5								5		
Other					7	0							6								7		
Sample B		51,5	6,6	13	28							27	27	100%	CRV	45,37	0,45	30%	31,7	59	28	22	79%
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		57,9	5,1	8,8	9	0	CVPG	57,8	1,2	22%	45	70,6	9								9		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		51,5	0,78	1,5	7	0	CVPG	50,4	0,32	22%	39,3	61,5	7								7		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (179) Siemens		47,0	2,5	5,3	5	0	CVPG	45,5	0,87	22%	35,4	55,6	5								5		
Other					7	0							6								7		
(306) 17-OH-progesterone	[nmol/L]				4							4	4	100%							4	3	75%
Samples and groups																							
Sample A		4,37	2,3	52	4							4	4	100%	CRV	2,225	0,022 ± 2,645	0	4,87		4	3	75%
Other					4	0							4								4		
Sample B		11,2	2,4	21	4							4	4	100%	CRV	11,64	0,18	44%	6,51	16,8	4	4	100%
Other					4	0							4								4		
(307) DHEA-S	[µmol/L]				16							15	15	100%							0		
Samples and groups																							
Sample A		18,5	2,8	15	16							15	15	100%							0		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		20,2	0,82	4,1	6	0	CVPG	20	0,23	21%	15,8	24,2	6										
Other					10	0							9										
Sample B		7,60	1,1	14	16							15	15	100%							0		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		8,35	0,60	7,2	6	0	CVPG	8,1	0,097	21%	6,39	9,81	6										
Other					10	0							9										

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End of report

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