

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

EQA round: E13/19 - Hormones 1

Dead line: 06.08.2019

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					31											31	30	97%						31	23	74%	
Samples and groups		[nmol/L]																									
Sample A			3,87	0,46	12	31										31	30	97%	CRV	4,396	0,044	20%	3,51	5,28	31	24	77%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott			3,65	0,26	7,2	10	0	CVPG	3,67	0,14	15%	3,11	4,23		10												10
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche			4,31	0,27	6,4	6	0	CVPG	4,15	0,069	15%	3,52	4,78		6												6
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens			4,16	0,23	5,5	8	0	CVPG	4,07	0,11	15%	3,45	4,69		8												8
Other					7	0									7												7
									4x 4/12, 3x 4/29											4x 4/12, 3x 4/29							
Sample B			6,36	0,89	14	31										31	30	97%	CRV	6,4	0,085	20%	5,12	7,68	31	27	87%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott			5,99	0,56	9,4	10	0	CVPG	5,93	0,34	15%	5,04	6,82		10												10
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche			6,93	0,64	9,2	6	0	CVPG	6,88	0,14	15%	5,84	7,92		6												6
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens			7,08	0,64	9,0	8	0	CVPG	6,99	0,24	15%	5,94	8,04		8												8
Other					7	0									7												7
									4x 4/12, 3x 4/29											4x 4/12, 3x 4/29							
(122) Total T4					29											29	27	93%							29	27	93%
Samples and groups		[nmol/L]																									
Sample A			160	11	7,1	29										29	28	97%	CRV	161,7	1,6	17%	134	190	29	28	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott			166	8,0	4,8	10	0	CVPG	165	4,9	13%	143	187		10												10
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche			159	3,7	2,3	6	0	CVPG	152	2,8	13%	132	172		6												6
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens			157	15	9,4	8	0	CVPG	162	7,1	13%	140	184		8												8
Other					5	0									5												5
									4x 4/12, 1x 4/29											4x 4/12, 1x 4/29							
Sample B			194	15	7,8	29										29	27	93%	CRV	201,3	2,3	17%	167	236	29	27	93%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott			197	15	7,5	10	0	CVPG	197	9,0	13%	171	223		10												10
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche			188	7,8	4,1	6	0	CVPG	184	3,7	13%	160	208		6												6
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens			201	13	6,7	8	0	CVPG	209	11	13%	181	237		8												8
Other					5	0									5												5
									4x 4/12, 1x 4/29											4x 4/12, 1x 4/29							
(123) TSH					56											56	54	96%							0		
Samples and groups		[mU/L]																									
Sample A			9,35	0,99	11	56										56	55	98%									0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott			8,55	0,45	5,2	19	0	CVPG	8,46	0,068	14%	7,27	9,65		19												
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter			8,76	0,32	3,7	10	0	CVPG	9,09	0,096	14%	7,81	10,4		10												

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EQA round: E13/19 - Hormones 1

Dead line: 06.08.2019

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					56							56	54	96%								0
Samples and groups	[mU/L]																					
Sample A		9,35	0,99	11	56							56	55	98%								0
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (Immulin)		10,0	0,90	9,0	6	0	CVPG	10,1	0,16	14%	8,68	11,6										
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		10,3	0,50	4,9	13	0	CVPG	10,1	0,034	14%	8,68	11,6										13
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		10,0	0,52	5,2	7	0	CVPG	10,3	0,13	14%	8,85	11,8										7
Other					1	0																1
																						1x 4/149
Sample B		6,21	0,69	11	56							56	55	98%								0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		5,68	0,34	5,9	19	0	CVPG	5,61	0,047	14%	4,82	6,4										19
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		5,79	0,21	3,5	10	0	CVPG	6	0,059	14%	5,16	6,84										10
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (Immulin)		6,71	0,55	8,2	6	0	CVPG	6,79	0,11	14%	5,83	7,75										6
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		6,83	0,33	4,8	13	0	CVPG	6,76	0,022	14%	5,81	7,71										13
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		6,68	0,43	6,5	7	0	CVPG	6,85	0,075	14%	5,89	7,81										7
Other					1	0																1
																						1x 4/149
(124) Free T4					56							56	53	95%								0
Samples and groups	[pmol/L]																					
Sample A		28,6	3,6	13	56							56	54	96%								0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		25,3	0,64	2,5	19	0	CVPG	25,4	0,21	13%	22	28,8										19
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		29,9	1,5	4,9	10	0	CVPG	29	0,33	13%	25,2	32,8										10
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (Immulin)		31,4	0,74	2,4	6	0	CVPG	31,5	0,29	13%	27,4	35,6										6
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		32,6	1,7	5,2	13	0	CVPG	33	0,18	13%	28,7	37,3										13
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		27,4	2,4	8,9	7	0	CVPG	26,5	0,39	13%	23	30										7
Other					1	0																1
																						1x 4/149
Sample B		39,1	7,2	18	56							56	55	98%								0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		31,8	0,94	2,9	19	0	CVPG	31,8	0,31	13%	27,6	36										19
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		42,2	1,1	2,6	10	0	CVPG	41,7	0,53	13%	36,2	47,2										10
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (Immulin)		43,2	2,0	4,6	6	0	CVPG	44,3	0,46	13%	38,5	50,1										6
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		47,0	3,4	7,2	13	0	CVPG	47,5	0,28	13%	41,3	53,7										13
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		37,1	2,8	7,6	7	0	CVPG	37,8	0,59	13%	32,8	42,8										7
Other					1	0																1
																						1x 4/149
(125) Free T3					47							47	39	83%								0
Samples and groups	[pmol/L]																					
Sample A		12,3	1,8	15	47							47	44	94%								0

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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					47							47	39	83%									0
Samples and groups	[pmol/L]																						
Sample A		12,3	1,8	15	47							47	44	94%									0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		11,8	1,1	9,4	16	0	CVPG	11,7	0,20	15%	9,94	13,5			16								
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		10,1	0,82	8,2	8	0	CVPG	10,5	0,27	15%	8,92	12,1			8								
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		14,6	0,48	3,3	11	0	CVPG	14,9	0,053	15%	12,6	17,2			11								
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		12,1	0,62	5,1	8	0	CVPG	12,0	0,077	15%	10,2	13,8			8								
Other					4	0									4								
Sample B		23,2	4,1	18	47							47	40	85%									0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		22,6	3,0	13	16	0	CVPG	22	0,55	15%	18,7	25,3			16								
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		19,2	1,8	9,2	8	0	CVPG	20	0,39	15%	17	23			8								
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		28,7	1,0	3,5	11	0	CVPG	29,5	0,097	15%	25	34			11								
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		21,9	2,3	10	8	0	CVPG	21,9	0,29	15%	18,6	25,2			8								
Other					4	0									4								
(200) Ferritin					46							42	42	100%									0
Samples and groups	[µg/L]																						
Sample A		58,5	11	18	46							42	42	100%									0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		65,7	4,5	6,8	13	0	CVPG	66,9	1,5	24%	50,8	83			13								
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		42,5	3,6	8,6	6	0	CVPG	44,8	1,5	24%	34	55,6			6								
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		67,4	4,5	6,7	5	0	CVPG	66,9	1,1	24%	50,8	83			5								
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		53,1	6,7	13	6	0	CVPG	54,9	1,8	24%	41,7	68,1			6								
Other					16	0									12								
Sample B		112	18	16	46							42	42	100%									0
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		129	7,5	5,8	13	0	CVPG	129	2,2	24%	98	160			13								
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		76,3	7,8	10	6	0	CVPG	84,5	2,7	24%	64,2	105			6								
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		122	9,6	7,9	5	0	CVPG	121	1,3	24%	91,9	151			5								
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		110	11	10	6	0	CVPG	106	2,7	24%	80,5	132			6								
Other					16	0									12								
(301) Cortisol					25							25	24	96%									25
Samples and groups	[nmol/L]																						25
Sample A		397	50	13	25							25	24	96%	CRV	397,1	4,8	22%	309	485			25
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		342	19	5,4	6	0	CVPG	343	4,8	16%	288	398			6								6
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		413	13	3,2	9	0	CVPG	396	3,4	16%	332	460			9								9

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EQA round: E13/19 - Hormones 1

Dead line: 06.08.2019

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					25							25	24	96%						25	25	100%			
Samples and groups	[nmol/L]																								
Sample A		397	50	13	25							25	24	96%	CRV	397,1	4,8	22%	309	485	25	25	100%		
(4) LIA (CLIA, CMIA, ECLIA); (179)		449	6,8	1,5	5	0	CVPG	420	8,9	16%	352	488	5								5				
Siemens																									
Other					5	0							5									5			
								4x 4/12, 1x 4/29								4x 4/12, 1x 4/29									
Sample B		1040	130	12	25							25	25	100%	CRV	1029	11	22%	802	1260	25	25	100%		
(4) LIA (CLIA, CMIA, ECLIA); (1)		904	90	10	6	0	CVPG	895	15	16%	751	1040	6								6				
Abbott																									
(4) LIA (CLIA, CMIA, ECLIA); (60)		1110	43	3,9	9	0	CVPG	1050	9,8	16%	882	1220	9								9				
Roche																									
(4) LIA (CLIA, CMIA, ECLIA); (179)		1140	91	8,0	5	0	CVPG	1100	22	16%	924	1280	5								5				
Siemens																									
Other					5	0							5									5			
								4x 4/12, 1x 4/29								4x 4/12, 1x 4/29									
(302) 17-beta-estradiol					28								28	26	93%								0		
Samples and groups	[pmol/L]																								
Sample A		208	25	12	28								28	26	93%								0		
(4) LIA (CLIA, CMIA, ECLIA); (1)		219	26	12	10	0	CVPG	217	6,0	22%	169	265	10												
Abbott																									
(4) LIA (CLIA, CMIA, ECLIA); (60)		195	19	9,9	7	0	CVPG	200	2,8	±44	156	244	7												
Roche																									
(4) LIA (CLIA, CMIA, ECLIA); (179)		217	19	8,6	6	0	CVPG	201	6,0	22%	156	246	6												
Siemens																									
Other					5	0							5												
								3x 4/12, 2x 4/29																	
Sample B		660	41	6,2	28								28	28	100%								0		
(4) LIA (CLIA, CMIA, ECLIA); (1)		673	21	3,1	10	0	CVPG	661	7,3	22%	515	807	10												
Abbott																									
(4) LIA (CLIA, CMIA, ECLIA); (60)		651	24	3,7	7	0	CVPG	667	5,3	22%	520	814	7												
Roche																									
(4) LIA (CLIA, CMIA, ECLIA); (179)		648	64	9,8	6	0	CVPG	651	11	22%	507	795	6												
Siemens																									
Other					5	0							5												
								3x 4/12, 2x 4/29																	
(303) Aldosterone					7								5	5	100%								0		
Samples and groups	[nmol/L]																								
Sample A		0,405	0,17	42	7								5	5	100%								0		
Other					7	0							5												
								2x 1/218, 3x 4/164, 2x 4/183																	
Sample B		1,37	0,39	28	7								5	5	100%								0		
Other					7	0							5												
								2x 1/218, 3x 4/164, 2x 4/183																	
(304) Progesterone					28								27	27	100%								28	24	86%
Samples and groups	[nmol/L]																								
Sample A		8,73	1,1	13	28								27	27	100%	CRV	8,52	0,100	26%	6,3	10,8	28	27	96%	
(4) LIA (CLIA, CMIA, ECLIA); (1)		8,80	0,89	10	9	0	CVPG	8,73	0,18	20%	6,98	10,5	9									9			
Abbott																									
(4) LIA (CLIA, CMIA, ECLIA); (60)		9,81	0,56	5,7	7	0	CVPG	9,56	0,093	20%	7,64	11,5	7									7			
Roche																									
(4) LIA (CLIA, CMIA, ECLIA); (179)		7,89	0,40	5,1	6	0	CVPG	7,63	0,20	20%	6,1	9,16	6									6			
Siemens																									

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		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}	
(304) Progesterone	[nmol/L]				28							27	27	100%							28	24	86%
Samples and groups																							
Sample A		8,73	1,1	13	28							27	27	100%	CRV	8,52	0,100	26%	6,3	10,8	28	27	96%
Other					6	0						5									6		
															1x 3/25, 4x 4/12, 1x 4/29								
Sample B		26,9	6,0	22	28							27	27	100%	CRV	26,35	0,26	26%	19,4	33,3	28	24	86%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		28,7	2,0	7,0	9	0	CVPG	27,8	0,51	20%	22,2	33,4	9								9		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		32,4	1,1	3,4	7	0	CVPG	31,3	0,25	20%	25	37,6	7								7		
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		20,6	1,3	6,3	6	0	CVPG	21	0,39	20%	16,8	25,2	6								6		
Other					6	0							5								6		
															1x 3/25, 4x 4/12, 1x 4/29								
(305) Testosterone	[nmol/L]				29							29	29	100%							29	28	97%
Samples and groups																							
Sample A		24,1	4,2	17	29							29	29	100%	CRV	23,22	0,28	30%	16,2	30,2	29	28	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		26,5	3,6	14	8	0	CVPG	26,3	0,52	22%	20,5	32,1	8								8		
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		18,6	0,07	0,40	5	0	CVPG	19,5	0,46	22%	15,2	23,8	5								5		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		25,4	1,8	7,0	8	0	CVPG	25	0,19	22%	19,5	30,5	8								8		
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		23,8	2,8	12	6	0	CVPG	23,6	0,53	22%	18,4	28,8	6								6		
Other					2	0							2								2		
															2x 4/29								
Sample B		5,39	0,38	7,0	29							29	29	100%	CRV	5,433	0,077	30%	3,8	7,07	29	29	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		5,30	0,45	8,5	8	0	CVPG	5,28	0,11	22%	4,11	6,45	8								8		
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		5,35	0,37	6,9	5	0	CVPG	5,59	0,11	22%	4,36	6,82	5								5		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		5,70	0,39	6,8	8	0	CVPG	5,59	0,049	22%	4,36	6,82	8								8		
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens		5,35	0,37	6,9	6	0	CVPG	5,33	0,10	22%	4,15	6,51	6								6		
Other					2	0							2								2		
															2x 4/29								
(306) 17-OH-progesterone	[nmol/L]				5							5	5	100%							5	5	100%
Samples and groups																							
Sample A		10,5	2,1	20	5							5	5	100%	CRV	13,61	0,14	44%	7,62	19,6	5	5	100%
Other					5	0							5								5		
															3x 1/36, 2x 4/183								
Sample B		6,70	0,34	5,1	5							5	5	100%	CRV	7,113	0,071	44%	3,98	10,3	5	5	100%
Other					5	0							5								5		
															3x 1/36, 2x 4/183								
(307) DHEA-S	[µmol/L]				16							15	14	93%							0		
Samples and groups																							
Sample A		6,95	1,0	15	16							15	14	93%							0		
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		7,66	0,62	8,1	7	0	CVPG	7,24	0,098	21%	5,71	8,77	7										
Other					9	0							8										
															1x 3/25, 1x 4/1, 3x 4/12, 2x 4/29, 2x 4/179								
Sample B		13,3	2,3	18	16							15	14	93%							0		

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

EQA round: E13/19 - Hormones 1

Dead line: 06.08.2019

Test	[unit]	Comparability					Traceability										
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}			
(307) DHEA-S					16							15	14	93%			0
Samples and groups	[µmol/L]																
Sample B		13,3	2,3	18	16							15	14	93%			0
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		15,2	0,67	4,4	7	0	CVPG	14,1	0,18	21%	11,1	17,1					
Other					9	0											
								1x 3/25, 1x 4/1, 3x 4/12, 2x 4/29, 2x 4/179									

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End of report

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