

Summary statistics - quantitative results

(Groups: measurement principle, manufacturer of kit)

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

EQA round: E21/19 - Hormones 2

Dead line: 12.02.2019

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

Test	[unit]	Comparability												
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(193) Ferritin					42							39	37	95%
Samples and groups	[µg/L]													
Sample A		95,0	10	11	42							39	38	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		96,7	4,0	4,2	9	0	CVPG	93,1	3,4	24%	70,7	116	9	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		101	13	13	8	0	CVPG	108	2,0	24%	82	134	8	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		90,9	6,7	7,4	9	0	CVPG	89,8	2,7	24%	68,2	112	9	
Other					16	0							13	
								4x 4/12, 2x 4/29, 1x 4/149, 2x 6/1, 1x 6/12, 3x 6/58, 2x 6/60, 1x 6/179						
Sample B		95,7	16	16	42							39	38	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		115	4,7	4,1	9	0	CVPG	110	2,7	24%	83,6	137	9	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		104	2,4	2,3	8	0	CVPG	104	1,2	24%	79	129	8	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		92,3	11	11	9	0	CVPG	91,2	1,9	24%	69,3	114	9	
Other					16	0							13	
								4x 4/12, 2x 4/29, 1x 4/149, 2x 6/1, 1x 6/12, 3x 6/58, 2x 6/60, 1x 6/179						
(320) LH					39							39	38	97%
Samples and groups	[U/L]													
Sample A		82,8	13	15	39							39	39	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		74,7	4,0	5,4	11	0	CVPG	74,3	1,3	15%	63,1	85,5	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		69,1	6,1	8,9	7	0	CVPG	66,4	1,4	15%	56,4	76,4	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		89,3	4,5	5,0	11	0	CVPG	89,7	0,47	15%	76,2	104	11	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		92,3	5,5	5,9	7	0	CVPG	89,4	1,6	15%	75,9	103	7	
Other					3	0							3	
								1x 1/36, 2x 4/29						
Sample B		30,5	7,0	23	39							39	38	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		26,2	1,4	5,4	11	0	CVPG	25,7	0,43	15%	21,8	29,6	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		22,1	3,1	14	7	0	CVPG	21,4	0,47	15%	18,1	24,7	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		35,3	1,6	4,4	11	0	CVPG	35,3	0,19	15%	30	40,6	11	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		34,2	1,4	4,2	7	0	CVPG	33,4	0,45	15%	28,3	38,5	7	
Other					3	0							3	
								1x 1/36, 2x 4/29						
(321) FSH					39							39	38	97%
Samples and groups	[U/L]													
Sample A		5,30	0,59	11	39							39	38	97%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		4,85	0,19	3,9	11	1	CVPG	4,77	0,048	15%	4,05	5,49	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		5,53	0,56	10	7	0	CVPG	5,45	0,12	15%	4,63	6,27	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		5,15	0,38	7,3	11	0	CVPG	5,12	0,034	15%	4,35	5,89	11	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		6,22	0,42	6,8	7	0	CVPG	5,98	0,085	15%	5,08	6,88	7	
Other					3	0							3	
								1x 1/36, 2x 4/29						
Sample B		26,7	2,8	11	39							39	39	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		25,6	1,6	6,2	11	0	CVPG	25,3	0,30	15%	21,5	29,1	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		25,5	0,90	3,5	7	0	CVPG	25,1	0,50	15%	21,3	28,9	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		26,4	1,8	6,8	11	0	CVPG	26,3	0,17	15%	22,3	30,3	11	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		31,8	0,55	1,7	7	0	CVPG	30,6	0,40	15%	26	35,2	7	
Other					3	0							3	
								1x 1/36, 2x 4/29						
(322) Prolactin					41							40	39	98%
Samples and groups	[mU/L]													
Sample A		569	52	9,2	41							40	40	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		592	37	6,2	13	0	CVPG	594	10	16%	498	690	13	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		506	19	3,7	7	0	CVPG	524	13	16%	440	608	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		594	32	5,4	11	0	CVPG	598	4,0	16%	502	694	11	

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

EQA round: E21/19 - Hormones 2

Dead line: 12.02.2019

Test	[unit]							Comparability						
		RoM	SD	CV [%]	N _{tot}	N _{out}	AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(322) Prolactin					41							40	39	98%
Samples and groups	[mU/L]													
Sample A		569	52	9,2	41							40	40	100%
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		519	38	7,4	7	0	CVPG	530	6,9	16%	445	615	7	
Other					3	0							2	
							1x 1/36, 2x 4/29							
Sample B		566	53	9,4	41							40	39	98%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		602	37	6,1	13	0	CVPG	597	8,8	16%	501	693	13	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		525	50	9,5	7	0	CVPG	523	14	16%	439	607	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		584	34	5,7	11	0	CVPG	584	3,9	16%	490	678	11	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		508	43	8,4	7	0	CVPG	526	7,0	16%	441	611	7	
Other					3	0							2	
							1x 1/36, 2x 4/29							
(325) Insulin					13							13	13	100%
Samples and groups	[mU/L]													
Sample A		41,4	6,8	17	13							13	13	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		47,6	1,4	3,0	5	0	CVPG	47,7	0,41	20%	38,1	57,3	5	
Other					8	0							8	
							4x 4/1, 3x 4/12, 1x 4/179							
Sample B		82,4	13	16	13							13	13	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		93,4	1,3	1,3	5	0	CVPG	93,1	0,84	20%	74,4	112	5	
Other					8	0							8	
							4x 4/1, 3x 4/12, 1x 4/179							
(326) Folate					39							39	32	82%
Samples and groups	[nmol/L]													
Sample A		14,8	3,6	24	39							39	35	90%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		17,2	1,1	6,2	14	0	CVPG	16,2	0,42	27%	11,8	20,6	14	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		14,4	0,82	5,7	7	0	CVPG	13,9	0,28	27%	10,1	17,7	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		11,3	2,2	19	12	0	CVPG	10,9	0,20	27%	7,95	13,9	12	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		17,8	1,8	10	5	0	CVPG	16,7	0,46	27%	12,1	21,3	5	
Other					1	0							1	
							1x 4/149							
Sample B		5,79	1,3	23	39							39	36	92%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		6,54	0,74	11	14	0	CVPG	6,37	0,23	27%	4,65	8,09	14	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		6,84	0,74	11	7	0	CVPG	6,56	0,18	27%	4,78	8,34	7	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		4,86	1,1	24	12	0	CVPG	4,8	0,11	±1,35	3,45	6,15	12	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		4,80	0,44	9,3	5	0	CVPG	4,53	0,17	±1,35	3,18	5,88	5	
Other					1	0							1	
							1x 4/149							
(327) Vitamin B12					35							35	31	89%
Samples and groups	[pmol/L]													
Sample A		503	67	13	35							35	32	91%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		508	43	8,5	11	0	CVPG	519	10	20%	415	623	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		445	43	9,6	8	0	CVPG	428	10	20%	342	514	8	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		553	22	4,1	10	0	CVPG	545	3,5	20%	436	654	10	
Other					6	0							6	
							1x 4/29, 1x 4/149, 4x 4/179							
Sample B		221	34	15	35							35	32	91%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		227	17	7,7	11	0	CVPG	231	4,7	20%	184	278	11	
(4) LIA (CLIA, CMIA, ECLIA); (12) Beckman Coulter		175	38	22	8	0	CVPG	180	6,2	20%	144	216	8	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		250	12	4,9	10	0	CVPG	254	2,2	20%	203	305	10	
Other					6	0							6	
							1x 4/29, 1x 4/149, 4x 4/179							
(328) hGH					12							11	11	100%
Samples and groups	[mU/L]													
Sample A		14,7	0,98	6,6	12							11	11	100%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (DPC)		15,2	0,39	2,6	6	0	CVPG	15,8	0,27	19%	12,7	18,9	6	
Other					6	1							5	
							1x 1/36, 1x 3/25, 2x 4/12, 1x 4/60, 1x 4/164							
Sample B		30,5	1,5	5,0	12							11	11	100%

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Dead line: 12.02.2019

Test	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability						N _{eva}	N _{suc}	S _{rel}
							AV	U _{AV}	D _{max}	LL	UL				
(328) hGH					12								11	11	100%
Samples and groups	[mU/L]														
Sample B		30,5	1,5	5,0	12								11	11	100%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (DPC)		31,4	0,67	2,1	6	0	CVPG	32,1	0,51	19%		26	38,2	6	
Other					6	0								5	
								1x 1/36, 1x 3/25, 2x 4/12, 1x 4/60, 1x 4/164							
(329) IGF-1					12								12	12	100%
Samples and groups	[µg/L]														
Sample A		540	110	20	12								12	12	100%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (DPC)		607	59	9,7	7	0	CVPG	594	10	22%		463	725	7	
Other					5	0								5	
								1x 1/36, 3x 4/164, 1x 4/183							
Sample B		177	32	18	12								12	12	100%
(4) LIA (CLIA, CMIA, ECLIA); (29) Siemens (DPC)		159	8,2	5,1	7	0	CVPG	160	3,2	22%		124	196	7	
Other					5	0								5	
								1x 1/36, 3x 4/164, 1x 4/183							
(390) Renin					8								8	7	88%
Samples and groups	[ng/L]														
Sample A		36,0	5,9	16	8								8	7	88%
Other					8	0								8	
								3x 1/185, 3x 4/164, 2x 4/183							
Sample B		40,7	5,4	13	8								8	7	88%
Other					8	0								8	
								3x 1/185, 3x 4/164, 2x 4/183							
(392) IGF-BP3					6								5	5	100%
Samples and groups	[µg/L]														
Sample A		4110	240	5,8	6								5	5	100%
Other					6	0								5	
								1x 1/36, 1x 1/999, 4x 4/29							
Sample B		4170	420	10	6								5	5	100%
Other					6	0								5	
								1x 1/36, 1x 1/999, 4x 4/29							
(393) C-peptide					34								28	28	100%
Samples and groups	[pmol/L]														
Sample A		276	62	22	34								28	28	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		252	15	6,0	10	0	CVPG	252	11	20%		201	303	10	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		329	15	4,5	14	0	CVPG	328	9,0	20%		262	394	14	
Other					10	0								4	
								1x 3/25, 3x 4/29, 2x 4/164, 4x 4/179							
Sample B		331	73	22	34								28	28	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		305	17	5,5	10	0	CVPG	304	13	20%		243	365	10	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		390	17	4,3	14	0	CVPG	390	10	20%		312	468	14	
Other					10	0								4	
								1x 3/25, 3x 4/29, 2x 4/164, 4x 4/179							
(394) SHBG					22								21	20	95%
Samples and groups	[nmol/L]														
Sample A		29,5	3,6	12	22								21	20	95%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		27,9	1,0	3,7	5	0	CVPG	27,8	0,73	20%		22,2	33,4	5	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		33,6	2,1	6,2	6	0	CVPG	32,2	0,27	20%		25,7	38,7	6	
Other					11	0								10	
								1x 3/25, 4x 4/12, 3x 4/29, 3x 4/179							
Sample B		118	19	16	22								21	21	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		105	5,9	5,6	5	0	CVPG	105	3,0	20%		84	126	5	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		139	8,9	6,4	6	0	CVPG	135	1,5	20%		108	162	6	
Other					11	0								10	
								1x 3/25, 4x 4/12, 3x 4/29, 3x 4/179							
(405) Parathyroid hormone (PTH)					24								24	23	96%
Samples and groups	[pmol/L]														
Sample A		19,6	4,4	22	24								24	24	100%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		25,8	1,5	5,9	6	0	CVPG	25,2	0,70	23%		19,4	31	6	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		16,1	0,82	5,1	9	0	CVPG	15,8	0,18	23%		12,1	19,5	9	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		20,0	0,74	3,7	5	0	CVPG	20,6	0,46	23%		15,8	25,4	5	
Other					4	0								4	
								4x 4/12							
Sample B		0,869	0,28	32	24								24	23	96%

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Test	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability							
							AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel}
(405) Parathyroid hormone (PTH)					24							24	23	96%
Samples and groups	[pmol/L]													
Sample B		0,869	0,28	32	24							24	23	96%
(4) LIA (CLIA, CMIA, ECLIA); (1) Abbott		1,11	0,019	1,7	6	0	CVPG	1,13	0,029	±0,28	0,854	1,41	6	
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		0,958	0,063	6,6	9	0	CVPG	1,03	0,018	±0,28	0,754	1,31	9	
(4) LIA (CLIA, CMIA, ECLIA); (179) Siemens (Bayer)		0,550	0,22	40	5	0	CVPG	0,574	0,037	±0,276	0,298	0,85	5	
Other					4	0							4	
														4x4/12
(407) Parathyroid hormone (PTH 1-84)					7							7	7	100%
Samples and groups	[pmol/L]													
Sample A		12,2	5,0	41	7							7	7	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		15,0	0,82	5,5	5	0	CVPG	15	2,3	17%	12,4	17,6	5	
Other					2	0							2	
														2x4/164
Sample B		0,925	0,44	47	7							7	7	100%
(4) LIA (CLIA, CMIA, ECLIA); (60) Roche		1,14	0,12	10	5	0	CVPG	1,14	0,34	±0,21	0,936	1,35	5	
Other					2	0							2	
														2x4/164

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End of report

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