Summary statistics - quantitative results

EQA round: E23/23 - Hormones 2

Deadline: 25.7.2023

Setup: groups - measurement principle, manufacturer of kit; Czech Republic; minimal size of the groups n = 5

RoM = robust average
SD = standard deviation
CV = coefficient of variation
N_{tot} = total number of the results
N_{out} = number of the results removed before calculation
AV = assigned value
CVPG = consensus of the participants' groups
U_{AV} = expanded uncertainty of the assigned value (k = 2)
D_{max} = acceptable difference
LL = lower limit
UL = upper limit
N_{eva} = number of the results assessed
N_{suc} = number of successful results
S_{rel} = relative success

Test / Sample / Group	[unit]	RoM	SD	CV [%]	N_{tot}	N_{out}	Comparability	AV	U_{AV}	D_{max}	LL	UL	N_{eva}	N_{suc}	S_{rel} [%]
(393) **C-peptide**	[pmol/L]				25								19	17	89
Sample A		360	53	15	25								19	18	95
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		338	16	4,6	8	0	CVPG	334	13	20%	267	401	8		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		398	4,7	1,2	9	0	CVPG	397	9,9	20%	317	477	9		
Other					8	0							2		
							2x 4/12, 1x 4/29, 2x 4/162, 1x 4/164, 2x 4/179								
Sample B		348	51	15	25								19	18	95
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		330	20	6	8	0	CVPG	332	15	20%	265	399	8		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		391	14	3,5	9	0	CVPG	393	12	20%	314	472	9		
Other					8	0							2		
							2x 4/12, 1x 4/29, 2x 4/162, 1x 4/164, 2x 4/179								
(193) **Ferritin**	[µg/L]				35								35	31	89
Sample A		184	33	18	35								35	34	97
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		206	15	7,5	10	0	CVPG	217	4,8	24%	164	270	10		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		201	14	7	10	0	CVPG	203	2,6	24%	154	252	10		
Other					15	0							15		
							3x 4/12, 3x 4/29, 1x 4/149, 2x 4/162, 1x 4/179, 2x 6/1, 2x 6/58, 1x 6/60								
Sample B		409	81	20	35								35	32	91
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		477	36	7,6	10	0	CVPG	504	9,6	24%	383	625	10		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		439	39	8,9	10	0	CVPG	441	5,2	24%	335	547	10		
Other					15	0							15		
							3x 4/12, 3x 4/29, 1x 4/149, 2x 4/162, 1x 4/179, 2x 6/1, 2x 6/58, 1x 6/60								
(321) **FSH**	[U/L]				26								26	22	85
Sample A		10,2	0,7	6,9	26								26	24	92
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		9,96	0,24	2,4	8	0	CVPG	9,83	0,13	15%	8,35	11,4	8		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		10,6	0,67	6,3	6	0	CVPG	10,6	0,22	15%	9,01	12,2	6		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		9,88	0,38	3,8	7	0	CVPG	9,67	0,058	15%	8,21	11,2	7		
Other					5	0							5		
							2x 4/162, 3x 4/179								
Sample B		45,4	3,3	7,3	26								26	23	88
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		46	3,2	6,9	8	0	CVPG	45,5	0,65	15%	38,6	52,4	8		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		46,1	4,1	8,8	6	0	CVPG	46,9	1,2	15%	39,8	54	6		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		40,7	7,2	18	7	0	CVPG	43,4	0,27	15%	36,8	50	7		
Other					5	0							5		
							2x 4/162, 3x 4/179								
(328) **hGH**	[mU/L]				5								5	4	80
Sample A													5	4	80
Other					5	0							5		
							1x 1/36, 2x 4/29, 2x 4/60								
Sample B													5	4	80
Other					5	0							5		
							1x 1/36, 2x 4/29, 2x 4/60								
(329) **IGF-1**	[µg/L]				7								7	7	100
Sample A													7	7	100
Other					7	0							7		
							2x 4/29, 3x 4/60, 2x 4/164								
Sample B													7	7	100
Other					7	0							7		
							2x 4/29, 3x 4/60, 2x 4/164								
(392) **IGF-BP3**	[µg/L]				3								3	3	100
Sample A													3	3	100
Other					3	0							3		
							2x 4/29, 1x 4/60								
Sample B													3	3	100
Other					3	0							3		
							2x 4/29, 1x 4/60								
(325) **Insulin**	[mU/L]				6								6	5	83
Sample A													6	6	100
Other					6	0							6		
							1x 4/1, 1x 4/12, 3x 4/60, 1x 4/179								
Sample B													6	5	83
Other					6	0							6		
							1x 4/1, 1x 4/12, 3x 4/60, 1x 4/179								

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Test / Sample / Group	[unit]	RoM	SD	CV [%]	N_{tot}	N_{out}	Comparability	AV	U_{AV}	D_{max}	LL	UL	N_{eva}	N_{suc}	S_{rel} [%]
(326) **Folate**	[nmol/L]				35								35	32	91
Sample A		44,1	6,3	14	35								35	34	97
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		49,2	5,3	11	12	0	CVPG	46	0,41	27%	33,5	58,5	12		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		43,6	2	4,6	5	0	CVPG	42,5	1	27%	31	54	5		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		39,6	3,7	9,3	11	0	CVPG	39,5	0,45	27%	28,8	50,2	11		
Other					7	0							7		
							2x 4/29, 1x 4/149, 2x 4/162, 2x 4/179								
Sample B		26,4	6,4	24	35								35	33	94
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		32	2,4	7,5	12	0	CVPG	31,1	0,63	27%	22,7	39,5	12		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		25,5	1,6	6,4	5	0	CVPG	24,3	0,55	27%	17,7	30,9	5		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		20,6	2,1	10	11	0	CVPG	20,7	0,25	27%	15,1	26,3	11		
Other					7	0							7		
							2x 4/29, 1x 4/149, 2x 4/162, 2x 4/179								
(320) **LH**	[U/L]				25								25	24	96
Sample A		92,7	16	17	25								25	25	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		84,6	4,8	5,7	8	0	CVPG	84,8	1,1	15%	72	97,6	8		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		77,6	4,2	5,4	6	0	CVPG	79,9	1,8	15%	67,9	91,9	6		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		106	3,7	3,5	6	0	CVPG	107	0,78	15%	90,9	124	6		
Other					5	0							5		
							2x 4/162, 3x 4/179								
Sample B		3,38	0,66	19	25								25	24	96
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,74	0,13	4,6	8	0	CVPG	2,72	0,034	15%	2,31	3,13	8		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		3,35	0,22	6,6	6	0	CVPG	3,46	0,082	15%	2,94	3,98	6		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		4,58	0,39	8,4	6	0	CVPG	4,9	0,041	15%	4,16	5,64	6		
Other					5	0							5		
							2x 4/162, 3x 4/179								
(407) **Parathyrin biointact (PTH 1-84)**	[pmol/L]				8								8	7	88
Sample A		1,73	0,22	13	8								8	8	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		1,73	0,22	13	7	0	CVPG	1,75	0,068	23%	1,34	2,16	7		
Other					1	0							1		
							1x 4/164								
Sample B		13,2	2,1	16	8								8	7	88
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		13,8	1,2	8,7	7	0	CVPG	13,8	0,44	23%	10,6	17	7		
Other					1	0							1		
							1x 4/164								
(405) **Parathyrin intact (PTH)**	[pmol/L]				16								16	16	100
Sample A		2,16	0,58	27	16								16	16	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		2,65	0,22	8,4	7	0	CVPG	2,62	0,058	23%	2,01	3,23	7		
Other					9	0							9		
							3x 4/12, 1x 4/29, 1x 4/60, 2x 4/162, 2x 4/179								
Sample B		22	3,3	15	16								16	16	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		24,6	2	8,2	7	0	CVPG	23,5	0,43	23%	18	29	7		
Other					9	0							9		
							3x 4/12, 1x 4/29, 1x 4/60, 2x 4/162, 2x 4/179								
(322) **Prolactin**	[mU/L]				27								27	26	96
Sample A		351	50	14	27								27	27	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		383	22	5,8	10	0	CVPG	380	6,5	16%	319	441	10		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		324	34	10	6	0	CVPG	324	5,9	16%	272	376	6		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		381	6,7	1,8	6	0	CVPG	384	2,8	16%	322	446	6		
Other					5	0							5		
							2x 4/162, 3x 4/179								
Sample B		191	31	16	27								27	26	96
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		209	14	6,6	10	0	CVPG	209	3,4	16%	175	243	10		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		179	8,9	5	6	0	CVPG	180	3,3	16%	151	209	6		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		210	7,6	3,6	6	0	CVPG	220	1,6	16%	184	256	6		
Other					5	0							5		
							2x 4/162, 3x 4/179								
(390) **Renin**	[ng/L]				6								6	6	100
Sample A		42,9	3,3	7,8	6								6	6	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (164) DiaSorin		41,9	1,9	4,6	5	0	CVPG	41,4	0,48	20%	33,1	49,7	5		
Other					1	0							1		
							1x 4/183								

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Test / Sample / Group	[unit]	RoM	SD	CV [%]	N_{tot}	N_{out}	Comparability	AV	U_{AV}	D_{max}	LL	UL	N_{eva}	N_{suc}	S_{rel} [%]
Sample B		43	3,1	7,2	6								6	6	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (164) DiaSorin		42,1	1,7	4,1	5	0	CVPG	41,4	0,5	20%	33,1	49,7	5		
Other					1	0							1		
							1x 4/183								
(394) **SHBG**	[nmol/L]				15								15	14	93
Sample A		33,7	1,8	5,3	15								15	15	100
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		34,1	0,37	1,1	5	0	CVPG	33,4	0,25	20%	26,7	40,1	5		
Other					10	0							10		
							4x 4/1, 4x 4/12, 1x 4/29, 1x 4/179								
Sample B		33,8	2,5	7,5	15								15	14	93
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		33,2	1,9	5,6	5	0	CVPG	33,4	0,23	20%	26,7	40,1	5		
Other					10	0							10		
							4x 4/1, 4x 4/12, 1x 4/29, 1x 4/179								
(327) **Vitamin B_{12}**	[pmol/L]				33								33	30	91
Sample A		409	52	13	33								33	31	94
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		421	30	7,2	11	0	CVPG	404	7,8	20%	323	485	11		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		315	5,2	1,6	5	0	CVPG	312	8,4	20%	249	375	5		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		443	31	7	10	0	CVPG	437	3,4	20%	349	525	10		
Other					7	0							7		
							3x 4/29, 1x 4/149, 2x 4/162, 1x 4/179								
Sample B		517	68	13	33								33	30	91
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (1) Abbott		537	32	5,9	11	0	CVPG	516	9,4	20%	412	620	11		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		427	8,2	1,9	5	0	CVPG	410	9,6	20%	328	492	5		
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (60) Roche		553	62	11	10	0	CVPG	550	4,1	20%	440	660	10		
Other					7	0							7		
							3x 4/29, 1x 4/149, 2x 4/162, 1x 4/179								
(319) **Vitamin B_{12} (active)**	[pmol/L]				5								0		
Sample A													0		
Other					5	0							0		
							3x 4/1, 1x 4/60, 1x 4/179								
Sample B													0		
Other					5	0							0		
							3x 4/1, 1x 4/60, 1x 4/179								