

EQA round: PRO1/24 - Specific Proteins

Deadline: 1.3.2024

Setup: groups - M (measurement principle); Slovakia; minimal size of the groups n = 5

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

Test Sample Group	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability					N _{eva}	N _{suc}	S _{rel} [%]	
							AV	U _{AV}	D _{max}	LL	UL				
(46) α-1-antitrypsin	[g/L]				22							22	20	91	
Sample A		1,05	0,16	15	22		CVP	1,07	0,04	25%	0,802	1,34	22	21	95
(2) Immunoturbidimetry		1,05	0,16	15	20	0							20		
Other					2	0							2		
							2x 3								
Sample B		1,7	0,32	19	22		CVP	1,73	0,078	25%	1,29	2,17	22	20	91
(2) Immunoturbidimetry		1,69	0,33	20	20	0							20		
Other					2	0							2		
							2x 3								
(53) α-2-macroglobulin	[g/L]				8								8	8	100
Sample A		1,07	0,053	4,9	8		CVP	1,07	0,021	21%	0,845	1,3	8	8	100
(2) Immunoturbidimetry		1,07	0,041	3,8	6	0							6		
Other					2	0							2		
							2x 3								
Sample B		2,77	0,12	4,2	8		CVP	2,78	0,064	21%	2,19	3,37	8	8	100
(2) Immunoturbidimetry		2,74	0,066	2,4	6	0							6		
Other					2	0							2		
							2x 3								
(45) Albumin	[g/L]				38								38	35	92
Sample A		34,9	1,2	3,5	38		CVP	35	0,23	10%	31,5	38,5	38	38	100
(1) BCG		34,9	1,3	3,6	34	0							34		
Other					4	0							4		
							1x 0, 2x 2, 1x 99								
Sample B		60	2	3,4	38		CVP	60,7	0,51	10%	54,6	66,8	38	35	92
(1) BCG		60	2,1	3,4	34	0							34		
Other					4	0							4		
							1x 0, 2x 2, 1x 99								
(47) C3 complement	[g/L]				31								31	30	97
Sample A		1,49	0,076	5,1	31		CVP	1,52	0,018	14%	1,3	1,74	31	30	97
(2) Immunoturbidimetry		1,48	0,073	4,9	29	0							29		
Other					2	0							2		
							2x 3								
Sample B		2,1	0,091	4,3	31		CVP	2,12	0,021	14%	1,82	2,42	31	30	97
(2) Immunoturbidimetry		2,09	0,085	4,1	29	0							29		
Other					2	0							2		
							2x 3								
(52) C4 complement	[g/L]				31								31	31	100
Sample A		0,314	0,023	7,2	31		CVP	0,307	0,005	21%	0,242	0,372	31	31	100
(2) Immunoturbidimetry		0,313	0,023	7,4	29	0							29		
Other					2	0							2		
							2x 3								
Sample B		0,487	0,041	8,5	31		CVP	0,474	0,008	21%	0,374	0,574	31	31	100
(2) Immunoturbidimetry		0,487	0,041	8,4	29	0							29		
Other					2	0							2		
							2x 3								
(55) Total protein	[g/L]				43								43	43	100
Sample A		47,3	3,7	7,9	43		CVP	48	0,65	18%	39,3	56,7	43	43	100
(1) Biuret		47,3	3,8	8	41	0							41		
Other					2	0							2		
							1x 0, 1x 99								
Sample B		88,2	3,6	4	43		CVP	89,7	0,53	18%	73,5	106	43	43	100
(1) Biuret		88,2	3,7	4,2	41	0							41		
Other					2	0							2		
							1x 0, 1x 99								
(49) Ceruloplasmin	[g/L]				19								17	15	88
Sample A		0,461	0,087	19	19								17	16	94
(2) Immunoturbidimetry; (58) Beckman Coulter (AU)		0,429	0,028	6,6	5	0	CVPG	0,432	0,021	19%	0,349	0,515	5		
Other					14	0							12		
							3x 2/1, 2x 2/5, 2x 2/12, 3x 2/60, 3x 2/91, 1x 3/149								
Sample B		0,582	0,11	19	19								17	15	88
(2) Immunoturbidimetry; (58) Beckman Coulter (AU)		0,54	0,03	5,5	5	0	CVPG	0,541	0,038	19%	0,438	0,644	5		
Other					14	0							12		
							3x 2/1, 2x 2/5, 2x 2/12, 3x 2/60, 3x 2/91, 1x 3/149								

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							AV	U _{AV}	D _{max}	LL	UL				
(51) Haptoglobin	[g/L]				19							19	17	89	
Sample A		1,02	0,055	5,4	19		CVP	1,04	0,013	13%	0,904	1,18	19	17	89
(2) Immunoturbidimetry		1,02	0,059	5,7	17	0							17		
Other					2	0							2		
							2x 3								
Sample B		1,95	0,14	7	19		CVP	1,94	0,03	13%	1,68	2,2	19	18	95
(2) Immunoturbidimetry		1,96	0,12	6,4	17	0							17		
Other					2	0							2		
							2x 3								
(41) IgA	[g/L]				49							49	49	100	
Sample A		1,25	0,048	3,8	49		CVP	1,25	0,009	14%	1,07	1,43	49	49	100
(2) Immunoturbidimetry		1,25	0,048	3,8	45	0							45		
Other					4	0							4		
							1x 0, 3x 3								
Sample B		3,52	0,13	3,8	49		CVP	3,53	0,024	14%	3,03	4,03	49	49	100
(2) Immunoturbidimetry		3,51	0,14	3,9	45	0							45		
Other					4	0							4		
							1x 0, 3x 3								
(42) IgG	[g/L]				49							49	48	98	
Sample A		4,26	0,19	4,5	49		CVP	4,33	0,034	13%	3,76	4,9	49	49	100
(2) Immunoturbidimetry		4,27	0,2	4,6	45	0							45		
Other					4	0							4		
							1x 0, 3x 3								
Sample B		9,97	0,41	4,1	49		CVP	10,1	0,06	13%	8,78	11,5	49	48	98
(2) Immunoturbidimetry		9,96	0,42	4,2	45	0							45		
Other					4	0							4		
							1x 0, 3x 3								
(43) IgM	[g/L]				49							49	49	100	
Sample A		0,374	0,035	9,5	49		CVP	0,382	0,006	23%	0,294	0,47	49	49	100
(2) Immunoturbidimetry		0,375	0,037	9,8	45	0							45		
Other					4	0							4		
							1x 0, 3x 3								
Sample B		1,61	0,098	6,1	49		CVP	1,63	0,012	18%	1,33	1,93	49	49	100
(2) Immunoturbidimetry		1,61	0,096	6	45	0							45		
Other					4	0							4		
							1x 0, 3x 3								
(50) Orosomuroid	[g/L]				13							13	11	85	
Sample A		0,752	0,064	8,5	13		CVP	0,752	0,025	25%	0,564	0,94	13	12	92
(2) Immunoturbidimetry		0,745	0,057	7,6	12	0							12		
Other					1	0							1		
							1x 3								
Sample B		1,28	0,057	4,4	13		CVP	1,29	0,026	20%	1,03	1,55	13	11	85
(2) Immunoturbidimetry		1,27	0,051	4	12	0							12		
Other					1	0							1		
							1x 3								
(48) Prealbumin	[g/L]				16							16	15	94	
Sample A		0,391	0,024	6,2	16		CVP	0,397	0,004	17%	0,329	0,465	16	15	94
(2) Immunoturbidimetry		0,389	0,022	5,6	15	0							15		
Other					1	0							1		
							1x 3								
Sample B		0,594	0,036	6	16		CVP	0,597	0,008	17%	0,495	0,699	16	15	94
(2) Immunoturbidimetry		0,591	0,032	5,5	15	0							15		
Other					1	0							1		
							1x 3								
(56) Soluble Transferrin Receptor (sTfR)	[mg/L]				17							13	13	100	
Sample A		0,828	0,26	32	17							13	13	100	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		0,735	0,022	3	5	0	CVPG	0,742	0,017	20%	0,593	0,891	5		
Other					12	0							8		
							1x 2/12, 1x 2/60, 2x 2/999, 3x 6/60, 3x 6/149, 2x 6/999								
Sample B		1,99	0,6	30	17							13	13	100	
(4) LIA (CLIA, CMIA, ECLIA, LOCI); (12) Beckman Coulter		1,79	0,045	2,5	5	0	CVPG	1,83	0,045	20%	1,46	2,2	5		
Other					12	0							8		
							1x 2/12, 1x 2/60, 2x 2/999, 3x 6/60, 3x 6/149, 2x 6/999								
(44) Transferrin	[g/L]				32							32	30	94	
Sample A		1,5	0,047	3,2	32		CVP	1,51	0,008	12%	1,32	1,7	32	30	94
(2) Immunoturbidimetry		1,5	0,048	3,2	30	0							30		
Other					2	0							2		
							2x 3								

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							AV	U _{AV}	D _{max}	LL	UL				
Sample B		3,42	0,12	3,5	32		CVP	3,45	0,018	12%	3,03	3,87	32	31	97
(2) Immunoturbidimetry		3,42	0,13	3,8	30	0							30		
Other					2	0							2		
							2x 3								