

EQA round: TDM1/23 - Therapeutic Drugs

Setup: groups - measurement principle; minimal size of the groups n = 5

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

Test Sample Group	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability					Traceability							
							AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel} [%]	AV	U _{AV}	D _{max}	LL	UL
Set 1																			
(81) Digoxin	[μg/L]				130							130	126	97					0
Sample A1		1,92	0,24	12	130		CVP	1,92	0,051	30%	1,34	2,5	130	126	97				0
(2) EIA (EMIT, CEDIA)		1,92	0,26	14	11	0							11						
(4) LIA, ILMA		1,9	0,3	16	66	0							66						
(6) Immunoturbidimetry, KIMS		1,94	0,13	6,7	51	0							51						
Other					2	0							2						
							2x 99												
Sample B1		1,61	0,21	13	130		CVP	1,61	0,045	30%	1,12	2,1	130	127	98				0
(2) EIA (EMIT, CEDIA)		1,61	0,25	15	11	0							11						
(4) LIA, ILMA		1,61	0,27	17	66	0							66						
(6) Immunoturbidimetry, KIMS		1,63	0,11	6,8	51	0							51						
Other					2	0							2						
							2x 99												
(87) Ethosuximide	[mg/L]				6								6	6	100				0
Sample A1					6	0							6	6	100				0
Other					6	0							6						
							2x 3, 4x 5												
Sample B1					6	0							6	6	100				0
Other					6	0							6						
							2x 3, 4x 5												
(84) Phenobarbital	[mg/L]				23								23	20	87				0
Sample A1		29,8	2,6	8,8	23		CVP	29,8	1,3	20%	23,8	35,8	23	21	91				0
(4) LIA, ILMA		30,2	1,6	5,2	9	0							9						
(6) Immunoturbidimetry, KIMS		29,8	3,3	11	8	0							8						
Other					6	0							6						
							1x 1, 1x 2, 2x 3, 2x 5												
Sample B1		11,3	0,98	8,6	23		CVP	11,3	0,5	20%	9,04	13,6	23	21	91				0
(4) LIA, ILMA		11,8	0,63	5,4	9	0							9						
(6) Immunoturbidimetry, KIMS		11,2	1,4	13	8	0							8						
Other					6	0							6						
							1x 1, 1x 2, 2x 3, 2x 5												
(85) Phenytoin	[mg/L]				36								36	32	89				0
Sample A1		7,54	0,63	8,4	36		CVP	7,54	0,26	20%	6,03	9,05	36	32	89				0
(2) EIA (EMIT, CEDIA)		8,05	0,96	12	5	0							5						
(4) LIA, ILMA		7,48	0,44	5,9	13	0							13						
(6) Immunoturbidimetry, KIMS		7,5	0,48	6,4	12	0							12						
Other					6	0							6						
							1x 1, 3x 3, 2x 5												

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Test Sample Group	[unit]	RoM	SD	CV [%]	N _{tot}	N _{out}	Comparability					Traceability						
							AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel} [%]	AV	U _{AV}	D _{max}	LL
Other					8	0	1x 2, 3x 3, 4x 5					8						
Sample B1					8	0						8 7 88						
Other					8	0	1x 2, 3x 3, 4x 5					8						
(82) Theophylline	[mg/L]				82							0						
Sample A1		7,65	0,6	7,8	82							0						
(2) EIA (EMIT, CEDIA)		7,8	0,52	6,7	12	0						CRV 7,582 0,076 24% 5,76 9,41						
(4) LIA, ILMA		7,09	0,53	7,4	26	0						82 81 99						
(6) Immunoturbidimetry, KIMS		7,87	0,45	5,8	40	0						12						
Other					4	0						26						
												40						
												4						
												4x 1						
Sample B1		23,9	1,8	7,4	82							0						
(2) EIA (EMIT, CEDIA)		24,4	2,3	9,4	12	0						CRV 23,7 0,24 24% 18 29,4						
(4) LIA, ILMA		22,2	2	8,8	26	0						82 80 98						
(6) Immunoturbidimetry, KIMS		24,7	1,2	4,8	40	0						12						
Other					4	0						26						
												40						
												4						
												4x 1						
Set 2																		
(89) Amicacin	[mg/L]				39							39 34 87						
Sample A2		34,7	2,3	6,6	39		CVP	34,7	0,9	20%	27,7	41,7	39	35	90	0		
(2) EIA (EMIT, CEDIA)		34,9	5,7	16	11	0						11						
(6) Immunoturbidimetry, KIMS		34,5	1,5	4,4	25	0						25						
Other					3	0						3						
												3x 1						
Sample B2		9,73	0,49	5	39		CVP	9,73	0,19	20%	7,78	11,7	39	36	92	0		
(2) EIA (EMIT, CEDIA)		9,8	0,64	6,5	11	0						11						
(6) Immunoturbidimetry, KIMS		9,67	0,5	5,2	25	0						25						
Other					3	0						3						
												3x 1						
(90) Gentamicin	[mg/L]				69							69 65 94						
Sample A2		8,76	2	23	69							69 66 96						
(1) FIA, FPIA, DELFIA		8,81	0,24	2,8	6	0	CVP	9,7	0,28	31%	6,69	12,8	6	0				
(2) EIA (EMIT, CEDIA)		10,9	2,5	23	10	0	CVP	9,7	0,28	31%	6,69	12,8	10					
(4) LIA, ILMA		9,76	0,44	4,5	20	0	CVP	9,7	0,28	31%	6,69	12,8	20					
(6) Immunoturbidimetry, KIMS		9,74	0,41	4,2	13	0	CVP	9,7	0,28	31%	6,69	12,8	13					
(6) Immunoturbidimetry, KIMS; (60) Roche		6,43	0,62	9,7	20	0	CVPG	6,43	0,34	21%	5,07	7,79	20					
Sample B2		6,72	1,5	23	69							69 67 97						
(1) FIA, FPIA, DELFIA		6,21	0,16	2,5	6	0	CVP	7,41	0,36	31%	5,11	9,71	6	0				
(2) EIA (EMIT, CEDIA)		8,47	1,3	15	10	0	CVP	7,41	0,36	31%	5,11	9,71	10					
(4) LIA, ILMA		7,38	0,74	10	20	0	CVP	7,41	0,36	31%	5,11	9,71	20					
(6) Immunoturbidimetry, KIMS		7,28	0,44	6	13	0	CVP	7,41	0,36	31%	5,11	9,71	13					
(6) Immunoturbidimetry, KIMS; (60) Roche		5,02	0,43	8,6	20	0	CVPG	5,02	0,24	21%	3,96	6,08	20					
(93) Methotrexate	[µmol/L]				12							12 11 92						
Sample A2		2,19	0,16	7,5	12		CVP	2,19	0,12	30%	1,53	2,85	12	11	92	0		
(4) LIA, ILMA		2,19	0,082	3,7	9	0						9						

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Deadline: 28.4.2023

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							AV	U _{AV}	D _{max}	LL	UL	N _{eva}	N _{suc}	S _{rel} [%]	AV	U _{AV}	D _{max}	LL	UL	N _{eva}
Other					3	0	2x 2, 1x 5					3								
Sample B2		1,13	0,15	13	12		CVP	1,13	0,11	30%	0,791	1,47	12	12	100	0				
(4) LIA, ILMA		1,13	0,11	9,9	9	0							9							
Other					3	0	2x 2, 1x 5					3								
(92) Vancomycin	[mg/L]				71								71	69	97	0				
Sample A2		13,8	1,2	8,5	71		CVP	13,8	0,34	28%	9,93	17,7	71	70	99	0				
(2) EIA (EMIT, CEDIA)		13,4	1,4	10	10	0							10							
(4) LIA, ILMA		14,6	0,86	5,9	27	0							27							
(6) Immunoturbidimetry, KIMS		13,5	0,8	6	29	0							29							
Other					5	0	4x 1, 1x 5					5								
Sample B2		16	1,4	8,7	71		CVP	16	0,4	28%	11,5	20,5	71	69	97	0				
(2) EIA (EMIT, CEDIA)		15	1,5	9,8	10	0							10							
(4) LIA, ILMA		16,9	0,93	5,5	27	0							27							
(6) Immunoturbidimetry, KIMS		15,4	0,74	4,8	29	0							29							
Other					5	0	4x 1, 1x 5					5								