

## Summary statistics - quantitative results

(Groups: manufacturer of kit)

Filter: minimal size of groups n = 5

## EQA round: TDM2/18 - Therapeutic Drugs

Dead line: 12.10.2018

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 <sub>AV</sub> = expanded uncertainty of the assigned value (k = 2)	

Test	[unit]	Comparability					Traceability										
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>			
<b>Set of samples 1</b>																	
<b>(81) Digoxin</b>					125			0				125	124	99%			
Samples and groups		[nmol/L]															
<b>Sample A1</b>		1,58	0,22	14	125			0	CRV	1,583	0,016	36%	1,01	2,16	125	125	100%
(1) Abbott		1,34	0,10	7,5	36	0									36		
(12) Beckman Coulter		1,66	0,12	7,2	12	0									12		
(29) Siemens (DPC)		1,88	0,03	1,6	5	0									5		
(58) Beckman Coulter (Olympus)		1,68	0,16	9,7	12	0									12		
(60) Roche		1,60	0,12	7,3	39	0									39		
(179) Siemens (Bayer)		1,78	0,12	6,9	17	0									17		
Other					4	0									4		
										4x 149							
<b>Sample B1</b>		2,71	0,31	12	125			0	CRV	2,688	0,027	36%	1,72	3,66	125	124	99%
(1) Abbott		2,39	0,16	6,6	36	0									36		
(12) Beckman Coulter		2,81	0,22	7,9	12	0									12		
(29) Siemens (DPC)		3,18	0,11	3,5	5	0									5		
(58) Beckman Coulter (Olympus)		2,84	0,16	5,6	12	0									12		
(60) Roche		2,73	0,19	7,1	39	0									39		
(179) Siemens (Bayer)		3,01	0,13	4,3	17	0									17		
Other					4	0									4		
										4x 149							
<b>(82) Theophylline</b>					88			0				88	86	98%			
Samples and groups		[µmol/L]															
<b>Sample A1</b>		36,8	2,6	7,2	88			0	CRV	37,2	0,37	24%	28,2	46,2	88	87	99%
(1) Abbott		36,4	2,3	6,3	26	0									26		
(12) Beckman Coulter		36,3	0,44	1,2	5	0									5		
(29) Siemens (DPC)		37,8	5,6	15	5	0									5		
(58) Beckman Coulter (Olympus)		35,3	1,8	5,2	7	0									7		
(60) Roche		37,8	2,7	7,2	30	0									30		
(179) Siemens (Bayer)		36,6	2,2	6,1	11	0									11		
Other					4	0									4		
										2x 149, 2x 166							
<b>Sample B1</b>		74,9	4,6	6,2	88			0	CRV	75,6	0,75	24%	57,4	93,8	88	87	99%
(1) Abbott		73,0	5,5	7,6	26	0									26		
(12) Beckman Coulter		74,6	3,4	4,6	5	0									5		
(29) Siemens (DPC)		81,1	9,0	11	5	0									5		
(58) Beckman Coulter (Olympus)		73,4	2,2	3,1	7	0									7		
(60) Roche		75,7	3,5	4,6	30	0									30		
(179) Siemens (Bayer)		77,7	5,7	7,4	11	0									11		
Other					4	0									4		
										2x 149, 2x 166							

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Test	[unit]	Comparability					Traceability																
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	
<b>(83) Primidone</b>					9							9	8	89%									0
— Samples and groups	[µmol/L]																						
<b>Sample A1</b>		51,1	5,5	11	9	CVP	51,1	6,8	24%	38,8	63,4	9	8	89%									0
(999) another manufacturer		51,5	6,1	12	7							7											
Other					2							2											
						1x 60, 1x 998																	
<b>Sample B1</b>		85,1	5,6	6,5	9	CVP	85,1	6,9	24%	64,6	106	9	9	100%									0
(999) another manufacturer		85,7	6,4	7,5	7							7											
Other					2							2											
						1x 60, 1x 998																	
<b>(84) Phenobarbital</b>					27							27	26	96%									0
— Samples and groups	[µmol/L]																						
<b>Sample A1</b>		47,8	4,0	8,3	27	CVP	47,8	1,9	20%	38,2	57,4	27	26	96%									0
(1) Abbott		50,2	2,2	4,4	9							9											
(60) Roche		47,0	1,3	2,7	9							9											
Other					9							9											
						2x 58, 1x 75, 1x 149, 1x 179, 4x 999																	
<b>Sample B1</b>		128	8,4	6,6	27	CVP	128	4,0	20%	102	154	27	27	100%									0
(1) Abbott		133	7,4	5,6	9							9											
(60) Roche		122	3,9	3,1	9							9											
Other					9							9											
						2x 58, 1x 75, 1x 149, 1x 179, 4x 999																	
<b>(85) Phenytoin</b>					47							47	42	89%									0
— Samples and groups	[µmol/L]																						
<b>Sample A1</b>		75,8	4,9	6,5	47	CVP	75,8	1,8	20%	60,6	91	47	46	98%									0
(1) Abbott		75,6	4,3	5,6	16							16											
(60) Roche		75,8	4,6	6,1	15							15											
(999) another manufacturer		74,4	5,3	7,1	5							5											
Other					11							11											
						1x 12, 3x 29, 3x 58, 1x 75, 1x 149, 2x 179																	
<b>Sample B1</b>		12,2	1,2	9,6	47	CVP	12,2	0,42	20%	9,76	14,7	47	43	91%									0
(1) Abbott		12,2	0,68	5,6	16							16											
(60) Roche		12,1	0,97	8,0	15							15											
(999) another manufacturer		12,2	1,4	11	5							5											
Other					11							11											
						1x 12, 3x 29, 3x 58, 1x 75, 1x 149, 2x 179																	
<b>(86) Carbamazepin</b>					63							63	61	97%									0
— Samples and groups	[µmol/L]																						
<b>Sample A1</b>		33,9	2,2	6,5	63	CVP	33,9	0,68	20%	27,1	40,7	63	63	100%									0
(1) Abbott		33,4	2,4	7,0	20							20											
(29) Siemens (DPC)		32,5	1,4	4,3	6							6											
(60) Roche		33,9	1,6	4,6	19							19											
(999) another manufacturer		34,9	1,3	3,8	5							5											
Other					13							13											
						2x 12, 4x 58, 1x 75, 2x 149, 4x 179																	
<b>Sample B1</b>		31,6	2,3	7,4	63	CVP	31,6	0,72	20%	25,2	38	63	61	97%									0
(1) Abbott		31,0	2,7	8,7	20							20											
(29) Siemens (DPC)		30,0	1,9	6,4	6							6											

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Test	[unit]	Comparability					Traceability																	
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>		
<b>(86) Carbamazepin</b>					63							63	61	97%									0	
--- Samples and groups ---	[µmol/L]																							
<b>Sample B1</b>		31,6	2,3	7,4	63	CVP	31,6	0,72	20%	25,2	38	63	61	97%									0	
(60) Roche		31,6	1,3	4,1	19							19												
(999) another manufacturer		33,3	0,73	2,2	5							5												
Other					13							13												
							2x 12, 4x 58, 1x 75, 2x 149, 4x 179																	
<b>(87) Ethosuximide</b>					9							9	8	89%									0	
--- Samples and groups ---	[µmol/L]																							
<b>Sample A1</b>		572	51	8,8	9	CVP	572	62	24%	434	710	9	8	89%									0	
(999) another manufacturer		572	51	8,8	7							7												
Other					2							2												
							1x 149, 1x 998																	
<b>Sample B1</b>		599	62	10	9	CVP	599	76	24%	455	743	9	8	89%									0	
(999) another manufacturer		599	62	10	7							7												
Other					2							2												
							1x 149, 1x 998																	
<b>(88) Valproic acid</b>					80							80	79	99%									0	
--- Samples and groups ---	[µmol/L]																							
<b>Sample A1</b>		249	19	7,6	80	CVP	249	5,2	20%	199	299	80	80	100%									0	
(1) Abbott		234	11	4,9	26							26												
(29) Siemens (DPC)		252	18	7,1	8							8												
(58) Beckman Coulter (Olympus)		282	16	5,8	7							7												
(60) Roche		251	12	4,9	27							27												
(179) Siemens (Bayer)		268	27	10	7							7												
Other					5							5												
							2x 12, 1x 75, 2x 149																	
<b>Sample B1</b>		388	26	6,7	80	CVP	388	7,1	20%	310	466	80	79	99%									0	
(1) Abbott		365	22	5,9	26							26												
(29) Siemens (DPC)		386	17	4,4	8							8												
(58) Beckman Coulter (Olympus)		439	18	4,1	7							7												
(60) Roche		390	15	3,8	27							27												
(179) Siemens (Bayer)		404	22	5,5	7							7												
Other					5							5												
							2x 12, 1x 75, 2x 149																	
<b>Set of samples 2</b>																								
<b>(89) Amicacin</b>					30							30	28	93%									0	
--- Samples and groups ---	[µmol/L]																							
<b>Sample A2</b>		10,3	0,89	8,6	30	CVP	10,3	0,40	20%	8,24	12,4	30	29	97%									0	
(1) Abbott		10,3	0,24	2,4	5							5												
(60) Roche		10,2	0,82	8,0	17							17												
Other					8							8												
							1x 12, 1x 58, 3x 149, 3x 166																	
<b>Sample B2</b>		29,6	1,2	4,2	30	CVP	29,6	0,55	20%	23,6	35,6	30	29	97%									0	
(1) Abbott		31,4	1,6	5,0	5							5												
(60) Roche		29,2	0,97	3,3	17							17												
Other					8							8												
							1x 12, 1x 58, 3x 149, 3x 166																	

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Test	[unit]	Comparability					Traceability																
		RoM	SD	CV [%]	N <sub>tot</sub>	N <sub>out</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	AV	U <sub>AV</sub>	D <sub>max</sub>	LL	UL	N <sub>eva</sub>	N <sub>suc</sub>	S <sub>rel</sub>	
<b>(90) Gentamicin</b>					55							55	47	85%									0
Samples and groups	[µmol/L]																						
<b>Sample A2</b>		21,7	4,1	19	55	CVP	21,7	1,4	31%	14,9	28,5	55	49	89%								0	
(1) Abbott		22,7	2,0	8,8	20							20											
(60) Roche		18,8	5,2	28	21							21											
(179) Siemens (Bayer)		25,0	1,5	5,9	7							7											
Other					7							7											
							3x 12, 3x 58, 1x 149																
<b>Sample B2</b>		17,5	3,0	17	55	CVP	17,5	1,0	31%	12	23	55	49	89%								0	
(1) Abbott		19,0	1,1	6,0	20							20											
(60) Roche		14,7	3,3	22	21							21											
(179) Siemens (Bayer)		20,3	2,6	13	7							7											
Other					7							7											
							3x 12, 3x 58, 1x 149																
<b>(92) Vankomycin</b>					58							58	56	97%								0	
Samples and groups	[µmol/L]																						
<b>Sample A2</b>		21,1	2,9	14	58	CVP	21,1	0,95	28%	15,1	27,1	58	56	97%								0	
(1) Abbott		20,9	1,3	6,0	22							22											
(60) Roche		23,0	3,1	13	23							23											
(179) Siemens (Bayer)		17,1	0,88	5,2	7							7											
Other					6							6											
							2x 12, 2x 58, 2x 149																
<b>Sample B2</b>		9,38	1,0	11	58	CVP	9,38	0,32	28%	6,75	12,1	58	56	97%								0	
(1) Abbott		9,29	0,49	5,3	22							22											
(60) Roche		10,1	0,91	9,0	23							23											
(179) Siemens (Bayer)		7,83	0,78	9,9	7							7											
Other					6							6											
							2x 12, 2x 58, 2x 149																
<b>(93) Methotrexate</b>					12							12	11	92%								0	
Samples and groups	[µmol/L]																						
<b>Sample A2</b>		4,86	0,55	11	12	CVP	4,86	0,39	30%	3,4	6,32	12	11	92%								0	
(1) Abbott		4,71	0,67	14	8							8											
Other					4							4											
							1x 60, 1x 126, 2x 999																
<b>Sample B2</b>		3,11	0,42	14	12	CVP	3,11	0,30	30%	2,17	4,05	12	11	92%								0	
(1) Abbott		3,12	0,33	10	8							8											
Other					4							4											
							1x 60, 1x 126, 2x 999																

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End of report

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