Quality Manager
Pathology Laboratory
Biochemistry Department
Town
County
Postcode

This Scheme is essentially web-based. We can alert you to information regarding the Scheme via email. The e-mail address (or addresses) we are currently using to contact your laboratory is shown below in red . If no e-mail address is displayed or the information shown is incorrect, please email us with an appropriate contact e-mail address as soon as possible, using the word 'feedback' in the title line.

Based on the date information you have provided, the transit time from specimen dispatch [ ] to receipt [ ] was day(s), and the subsequent time to analysis [ ] in your laboratory was day(s). (Missing values indicate dates not provided. "0 days" represents same day).

Any comments you made to us are shown below and have been acted upon where necessary

Any specific comments applicable only to laboratory are shown below

Any general comments applicable to all laboratories are shown below

Performance Surveillance and Performance Issues

If you have a red banner for any analyte on the Performance Summary Icon (PSI) page, then you should log this in your Quality Management System.

Birmingham Quality is here to help. If you are unsure as to why you have out-of-consensus problems or if you are having difficulties with your Root Cause Analysis, then please do contact us.

It is the responsibility of the Participant to act on, investigate and hopefully resolve, all out-of-consensus performance.

It is the responsibility of the Organiser to highlight in the regular report any out-of-consensus performance by the use of scores, symbols, graphs and ‘traffic lights’ etc.

Likewise, for the non-numerical analytes, please check the Pie Charts and other graphical representations to see if you are out-of-consensus.

Finlay MacKenzie

Director, Birmingham Quality

You have until the close of Distribution 773 (26/06/2018) to submit late results / request amendments to results for Distribution 772.

Please enter any late results or requests to amend non-analytical errors for Distribution 772 on the web under the usual Results button ensuring the correct Distribution number has been selected. You should include your name and a valid reason. Amending results is at the discretion of the Director and is not an automatic entitlement.

We are not accepting any further requests to amend results or to change methods for Distribution 771.

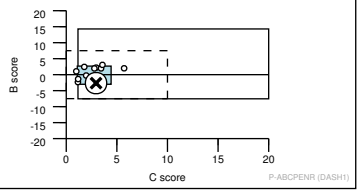
Report authorised on Thursday 24 May 2018 by:

Finlay MacKenzie
Director, Birmingham Quality

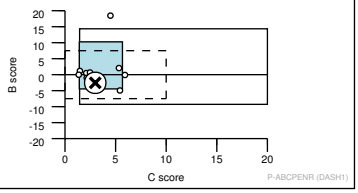
Published at 15:03 on Tuesday 29 May 2018

Performance Summary Icons (click graph for details)

Lead



Cadmium



Participation summary

Analytical Performance over the last 6 months (rolling time window of 6 distributions)

All our time periods are 'rolling' to give you current information.
You may wish to keep you own log of Calendar Year or Financial Year time points if you require 'year-end' statements for your own internal use.
Any analytes with out of consensus performance will be highlighted in red and can be clicked for further details.

You have out of consensus performance for:	*None*	
You have in consensus performance for:	Lead	Cadmium
You have no performance data for:	*None*	

Participation and Return Rates

This scheme cycle is notionally every four weeks.
Analytically, we assess you over a six month time window (6 Distributions).
For return rates, late and amended results we assess you over a twelve month period (12 distributions).

	Distributions	**Rating**	**Affected Distributions**
Participation	12 distributions out of a possible 12	Satisfactory	
Late Returns	0 distributions from the last 12	Satisfactory	
Amendments	1 distribution accepted from the last 12	Satisfactory	770

Analytical Performance for specimens from distribution 772 only

You can judge, in association with your IQC and other QA measures, if your current performance is a blip or part of a trend.

Out of consensus for at least one specimen for:	*None*	
In consensus for all specimens for:	Lead	Cadmium
You have no specimen %bias etc. for:	*None*	
You are not registered for:	*None*	

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Distribution Summary

If your laboratory is outside of the acceptable limits of performance for any its rolling time-window scores (A, B or C scores), this will be indicated by a red traffic light symbol. It is the responsibility of the laboratory to undertake an internal investigation to establish the underlying cause and put in place corrective and preventive action. Please do not wait to receive a formal notification of performance from the Scheme Organiser or the National Quality Assurance Advisory Panel (NQAAP) before logging the non-conformity and, where necessary, acting upon the data contained in your report. A green traffic light merely reflects that your laboratory is performing as well as the state-of-the-art allows; it does not necessarily mean that your assay / laboratory performance is good enough clinically. **Distributions normally comprise three specimens.** This, together with the widening of the concentration range of specimens that can be included in performance assessment enabled by the 'ABC of EQA' scoring system, has further enhanced the quality of the performance information the Scheme provides.

	Specimen	Pool	Result	Target	Specimen %bias	A score	B score	C score	A	B	C
Lead (umol/L)	772A	588	0.12	0.12	-1.9 ♦	32	-2.6	2.9	● ↔	● ↔	● ↔
	772B	590	0.21	0.22	-4.1 ♦						
	772C	589	0.32	0.32	+0.5 ♦						
Cadmium (nmol/L)	772A	588	102.3	109.0	-6.2 ▽	57	-2.6	3.0	● ↔	● ↔	● ↔
	772B	590	56.6	60.5	-6.4 ▽						
	772C	589	11.9	12.2	-2.3 ♦						

You have until the close of Distribution 773 (26/06/2018) to submit late results / request amendments to results for Distribution 772.

Please enter any late results or requests to amend non-analytical errors for Distribution 772 on the web under the usual Results button ensuring the correct Distribution number has been selected. You should include your name and a valid reason.

Amending results is at the discretion of the Director and is not an automatic entitlement.

We are not accepting any further requests to amend results or to change methods for Distribution 771.

Specimen 772A (Pool 588): Equine blood + 0.10 umol/L Lead + 110.1 nmol/L Cadmium

Specimen 772B (Pool 590): Equine blood 1.1, Pool 588.Pool 589

Specimen 772C (Pool 589): Equine blood + 0.30 umol/L Lead + 10.0 nmol/L Cadmium

Distribution 773 will be dispatched on 11/06/2018. Results are due back in Birmingham by, notionally, 23:59 on 26/06/2018.

Where your results appear as "XPL", it is because you did not report a numerical value for that analyte, but you did provide an explanation as to why a result was not reported.

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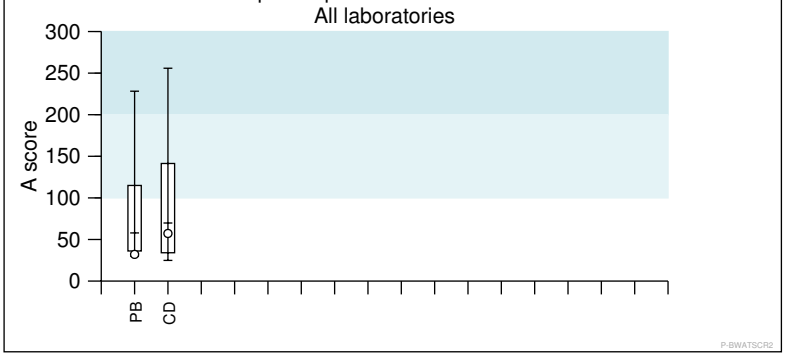
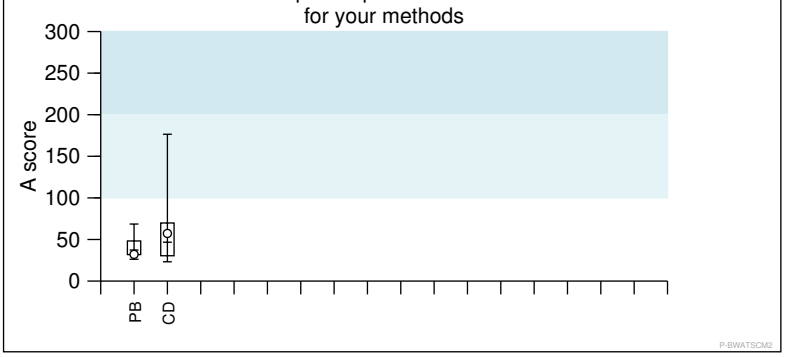
Method Summary

Our method update service is web-based and is accessed online via the 'edit' button on the 'Results and Reports page'. You can select from a dropdown of methods or select the default option from the major manufacturer's products*.

*If you are not using the system according to the manufacturer's instructions, please select the in-house category within your system's method principle.

	Method Principle	Your Method	Units	A score with trend arrow	Method median A score	All lab median A score
Lead		ICP-MS [7]	umol/L	32 ● ↔	37	58
Cadmium		ICP-MS [7]	nmol/L	57 ● ↔	47	70





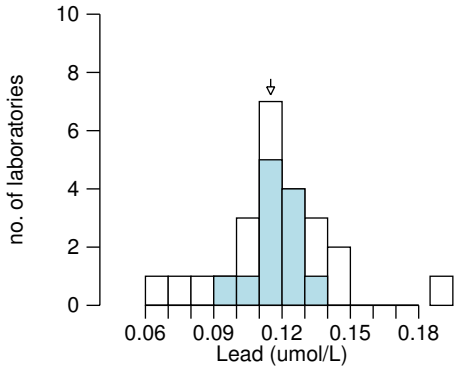
Spec.	Pool	Pool description / Treatments / Additions
772A	588	Equine blood + 0.10 umol/L Lead
772B	590	Pool 588:Pool 589 1:1
772C	589	Equine blood + 0.30 umol/L Lead

□ All methods
▫ ICP-MS [7]

Your A score is	32 ↔
Your B score is	-2.6 ↔
Your C score is	2.9 ↔
The A limit is	200
The B limit is +/-	7.5
The C limit is	10.0

Specimen : 772A

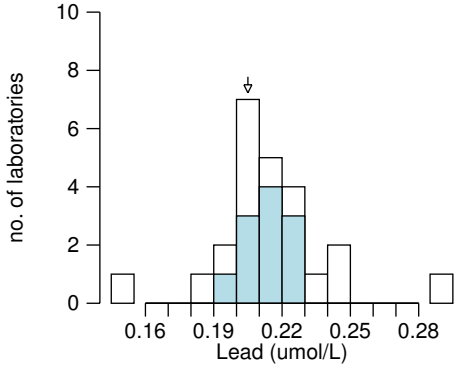
	n	Mean	SD	CV(%)
All methods [ALTM]	24	0.12	0.02	16.4
Electrothermal atomisation AAS [2]	11	0.12	0.03	23.8
No extraction/digestion	8	0.12	0.03	28.9
ICP-MS [7]	12	0.12	0.01	8.0



Your result	0.12
Target value (ICP-MS mean)	0.12
Standard Uncertainty	0.00
Your specimen: %bias	-1.9 ◆
Accuracy Index	10
ALTM	0.12
Your method mean	0.12
Your submethod mean	

Specimen : 772B

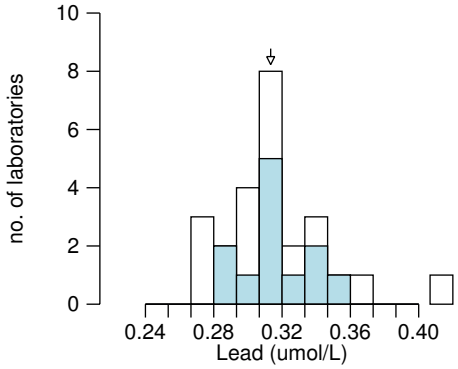
	n	Mean	SD	CV(%)
All methods [ALTM]	24	0.22	0.02	8.0
Electrothermal atomisation AAS [2]	12	0.22	0.02	10.9
No extraction/digestion	8	0.23	0.02	10.5
ICP-MS [7]	11	0.22	0.01	4.9



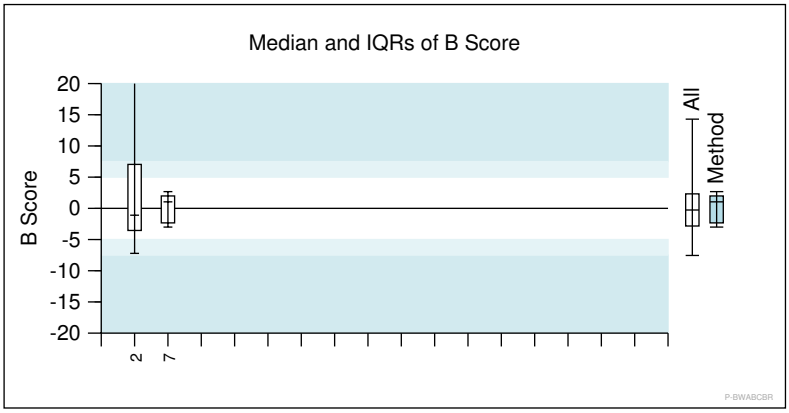
Your result	0.21
Target value (ICP-MS mean)	0.22
Standard Uncertainty	0.00
Your specimen: %bias	-4.1 ◆
Accuracy Index	34
ALTM	0.22
Your method mean	0.22
Your submethod mean	

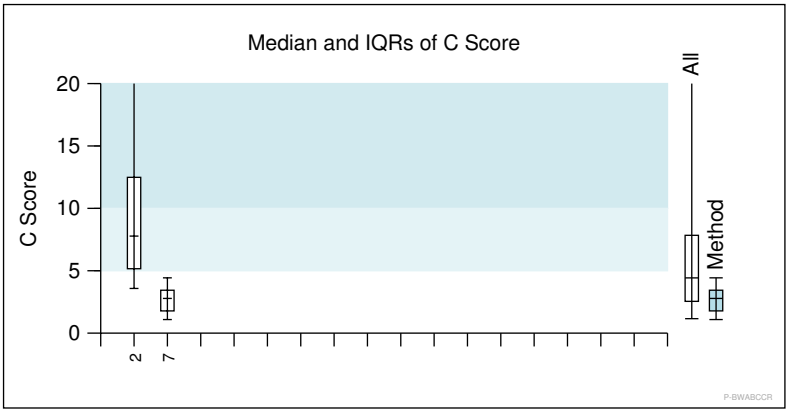
Specimen : 772C

	n	Mean	SD	CV(%)
All methods [ALTM]	25	0.31	0.03	8.2
Electrothermal atomisation AAS [2]	12	0.32	0.03	10.5
No extraction/digestion	8	0.30	0.02	7.2
ICP-MS [7]	12	0.32	0.02	6.5



Your result	0.32
Target value (ICP-MS mean)	0.32
Standard Uncertainty	0.01
Your specimen: %bias	+0.5 ◆
Accuracy Index	6
ALTM	0.31
Your method mean	0.32
Your submethod mean	





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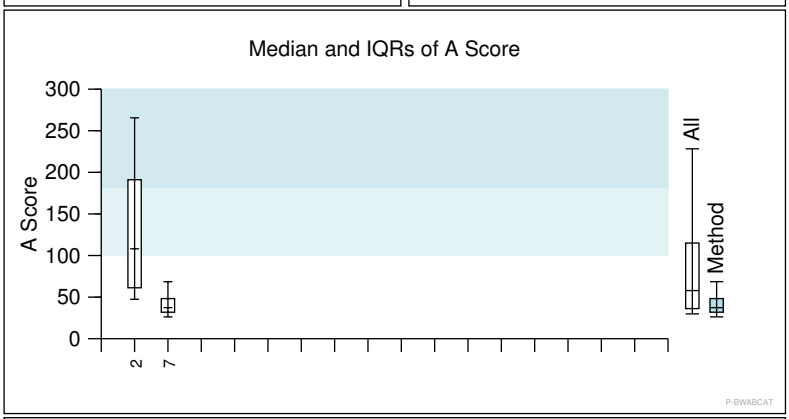
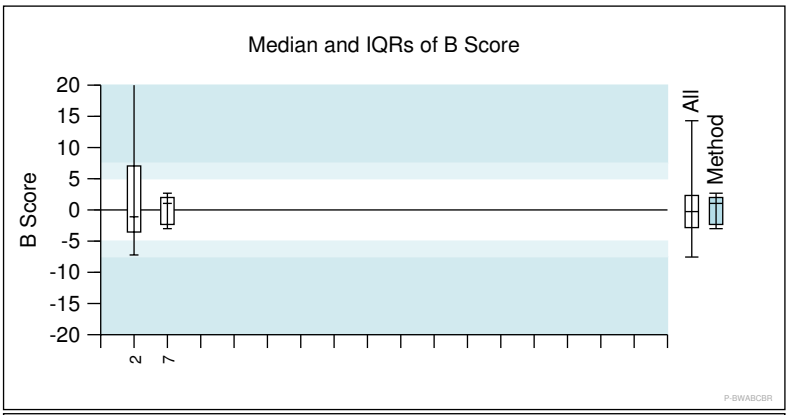
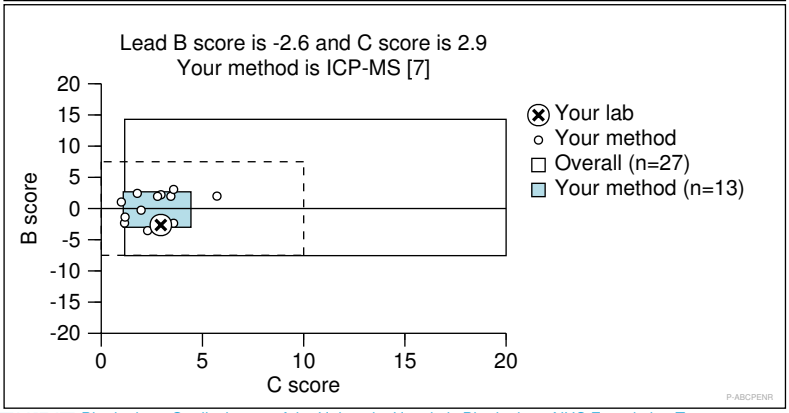
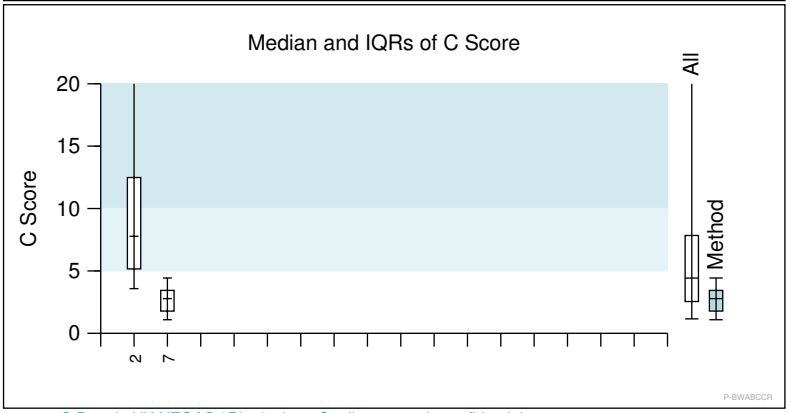
Pool (exclusion) [Type]	Distribution 767 28-Nov-2017 result	**target**	%bias	Distribution 768 16-Jan-2018 result	**target**	%bias	Distribution 769 13-Feb-2018 result	**target**	%bias	Distribution 770 20-Mar-2018 result	**target**	%bias	Distribution 771 24-Apr-2018 result	**target**	%bias	Distribution 772 22-May-2018 result	**target**	%bias
588	0.11	**0.12**	-10.5													0.12	**0.12**	-1.9
597										0.13	**0.13**	-0.2						
590	0.20	**0.22**	-7.1													0.21	**0.22**	-4.1
599										0.23	**0.22**	+2.5						
589	0.29	**0.32**	-8.7													0.32	**0.32**	+0.5
598										0.33	**0.33**	-0.5						
592				0.42	**0.42**	+0.3												
594							0.60	**0.62**	-2.5									
596							0.99	**1.00**	-1.2									
600													0.94	**1.03**	-8.5			
602													1.15	**1.18**	-2.8			
593				1.26	**1.27**	-0.6												
601													1.26	**1.36**	-7.1			
595							1.39	**1.40**	-0.4									
591				2.14	**2.15**	-0.3												
Method mean	7		-8.8	7		-0.2	7		-1.4	7		+0.6	7		-6.1	7		-1.8
A score	85			69			57			32			36			32		
B score	-2.9			-2.2			-1.8			-1.7			-2.8			-2.6		
C score	4.6			4.5			4.1			3.1			3.2			2.9		









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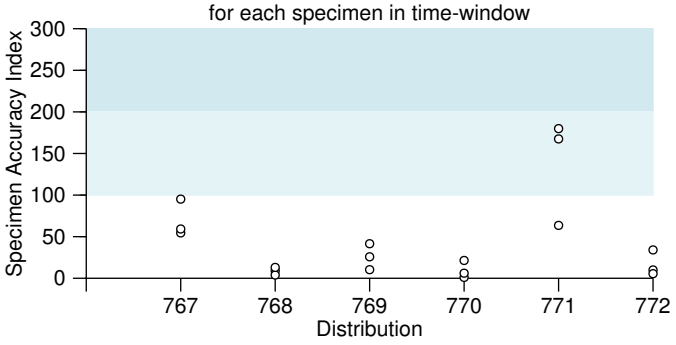
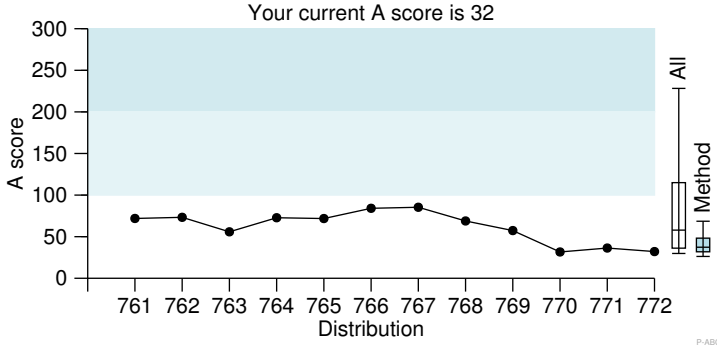
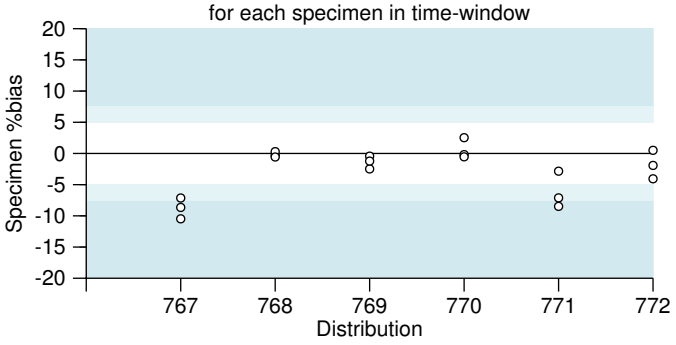
Specimen Accuracy Index
for each specimen in time-window



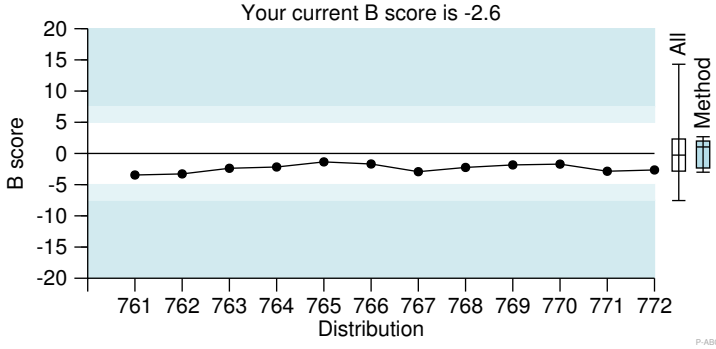
A score by distribution
Your current A score is 32



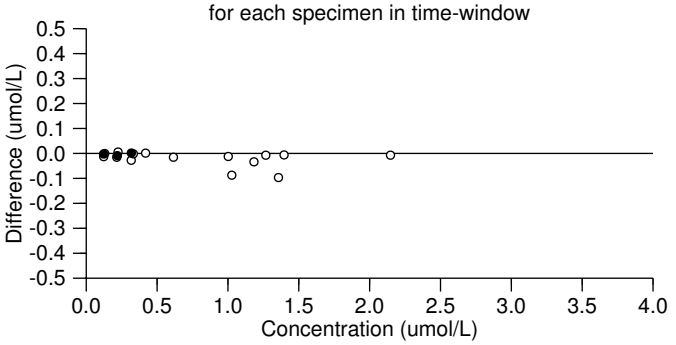
Specimen %bias
for each specimen in time-window



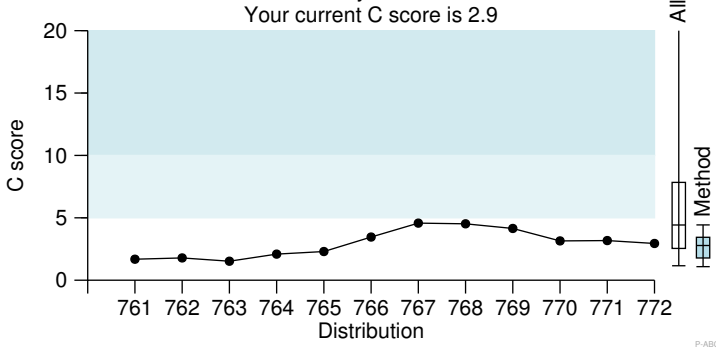
B score by distribution
Your current B score is -2.6



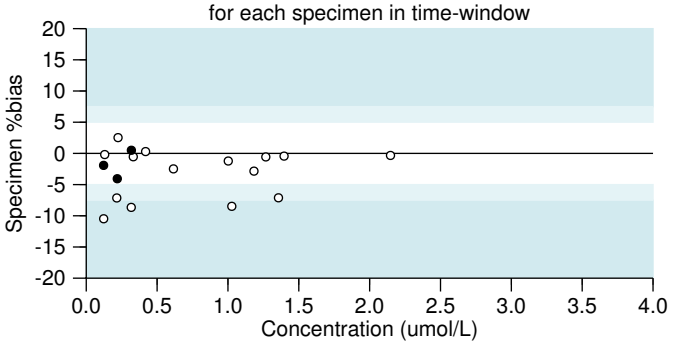
Difference (result-target)
for each specimen in time-window



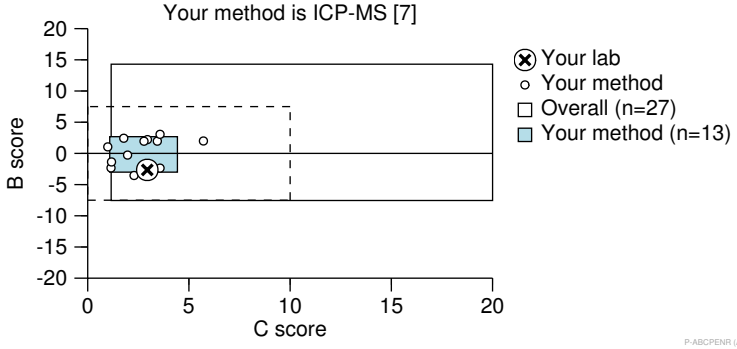
C score by distribution
Your current C score is 2.9



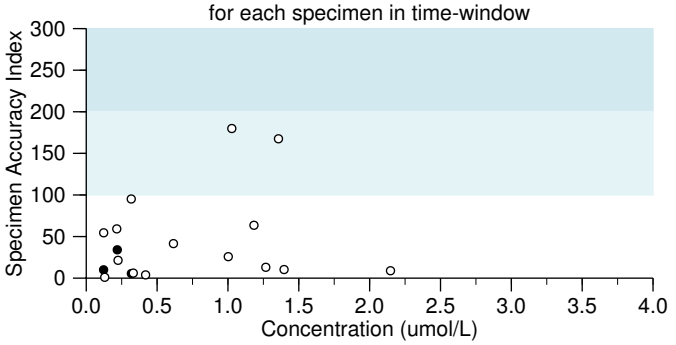
Specimen %bias
for each specimen in time-window



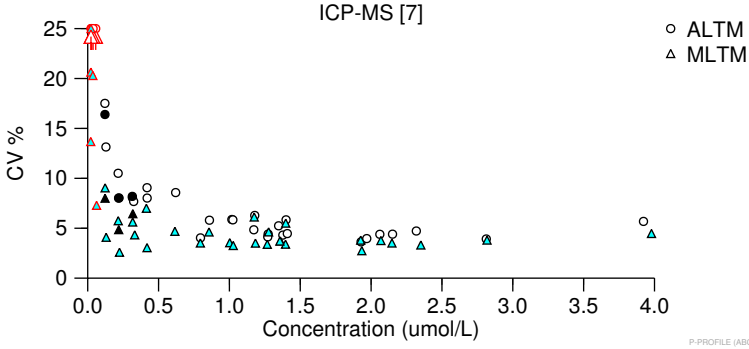
Lead B score is -2.6 and C score is 2.9
Your method is ICP-MS [7]



Specimen Accuracy Index
for each specimen in time-window



Lead Between-laboratory agreement
ICP-MS [7]



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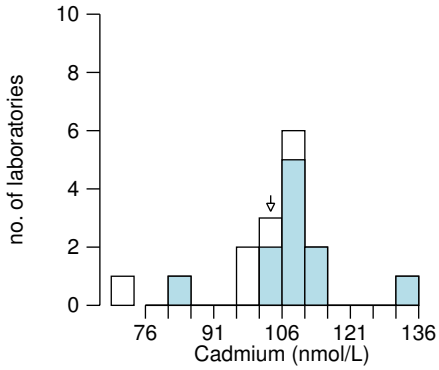
Spec.	Pool	Pool description / Treatments / Additions
772A	588	Equine blood + 110.1 nmol/L Cadmium
772B	590	Pool 588:Pool 589 1:1
772C	589	Equine blood + 10.0 nmol/L Cadmium

□ All methods
▫ ICP-MS [7]

Your A score is	57 ↔
Your B score is	-2.6 ↔
Your C score is	3.0 ↔
The A limit is	200
The B limit is +/-	7.5
The C limit is	10.0

Specimen : 772A

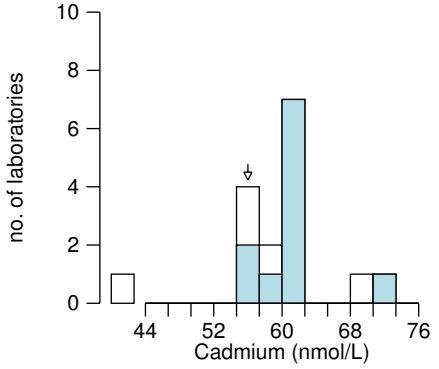
	n	Mean	SD	CV(%)
All methods [ALTM]	16	105.3	9.3	8.9
Electrothermal atomisation AAS [2]	5	101.1	7.8	7.7
ICP-MS [7]	11	109.0	5.1	4.7



Your result	102.3
Target value (ICP-MS mean)	109.0
Standard Uncertainty	2.1
Your specimen: %bias	-6.2 ▽
Accuracy Index	124
ALTM	105.3
Your method mean	109.0
Your submethod mean	

Specimen : 772B

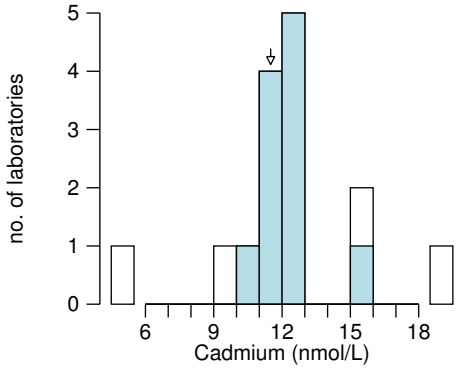
	n	Mean	SD	CV(%)
All methods [ALTM]	16	59.9	4.5	7.4
Electrothermal atomisation AAS [2]	5	56.1	3.1	5.5
ICP-MS [7]	11	60.5	2.2	3.7



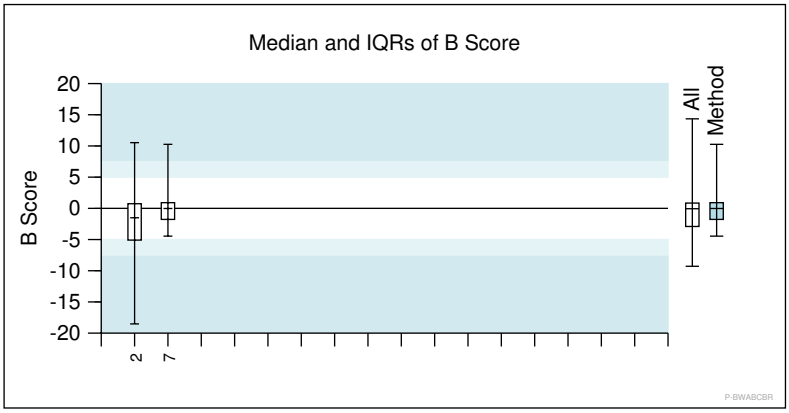
Your result	56.6
Target value (ICP-MS mean)	60.5
Standard Uncertainty	0.9
Your specimen: %bias	-6.4 ▽
Accuracy Index	107
ALTM	59.9
Your method mean	60.5
Your submethod mean	

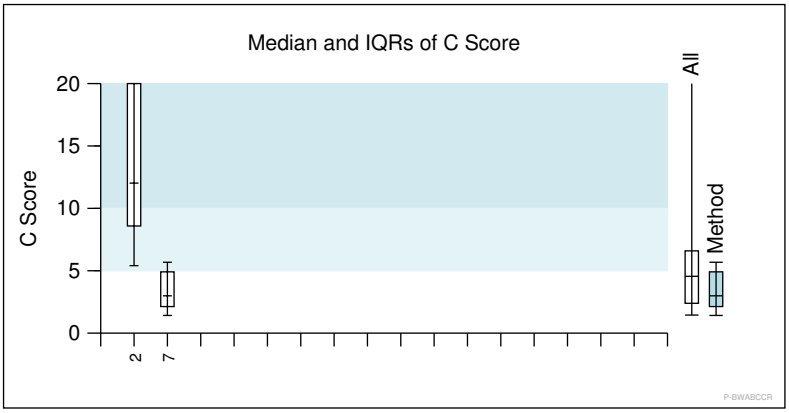
Specimen : 772C

	n	Mean	SD	CV(%)
All methods [ALTM]	15	12.4	1.9	14.9
Electrothermal atomisation AAS [2]	4	13.0		
ICP-MS [7]	11	12.2	0.5	4.2



Your result	11.9
Target value (ICP-MS mean)	12.2
Standard Uncertainty	0.2
Your specimen: %bias	-2.3 ◆
Accuracy Index	15
ALTM	12.4
Your method mean	12.2
Your submethod mean	





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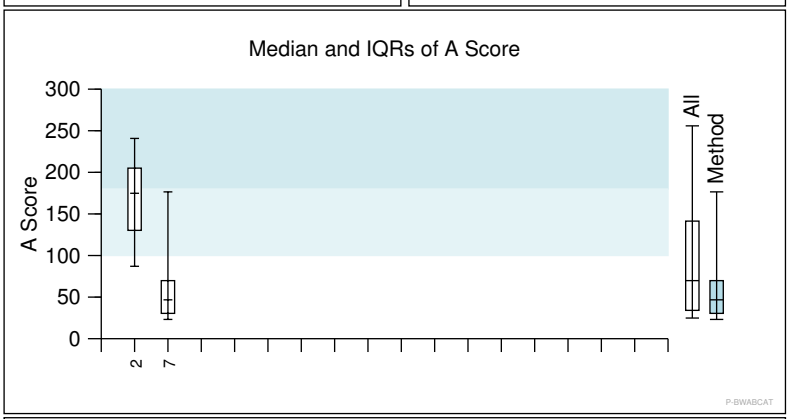
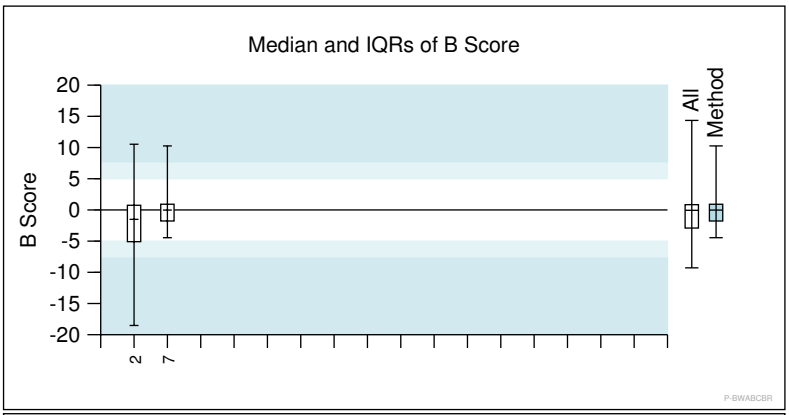
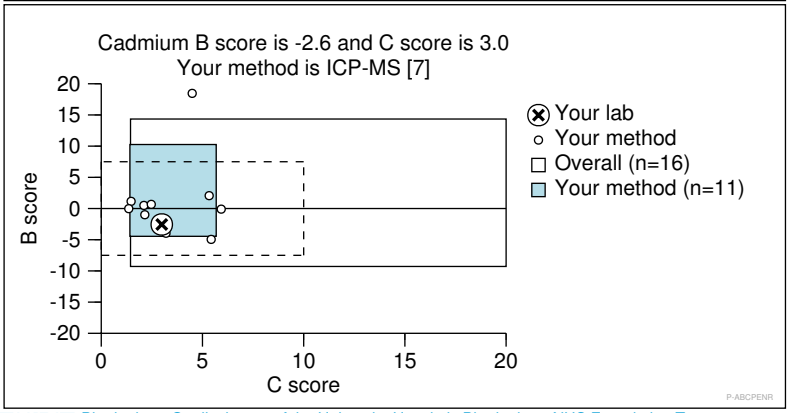
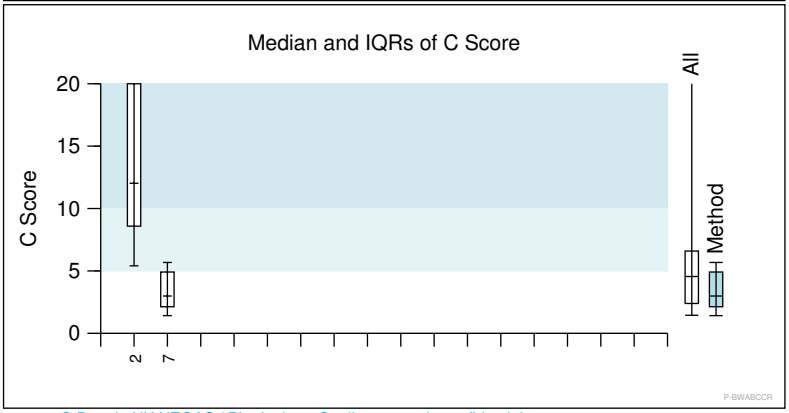
Pool (exclusion) [Type]	Distribution 767 28-Nov-2017 result	**target**	%bias	Distribution 768 16-Jan-2018 result	**target**	%bias	Distribution 769 13-Feb-2018 result	**target**	%bias	Distribution 770 20-Mar-2018 result	**target**	%bias	Distribution 771 24-Apr-2018 result	**target**	%bias	Distribution 772 22-May-2018 result	**target**	%bias
589	13.02	**12.0**	+8.4													11.9	**12.2**	-2.3
600													11.3	**12.3**	-7.9			
591				21.76	**22.1**	-1.3												
593				29.2	**30.6**	-4.5												
598										31.5	**32.5**	-3.1						
592				39.72	**40.6**	-2.1												
599										43.4	**42.1**	+3.1						
595							39.6	**42.4**	-6.6									
602													42.6	**42.9**	-0.6			
597										51.7	**52.5**	-1.5						
596							58.2	**59.8**	-2.7									
590	62.08	**60.5**	+2.6													56.6	**60.5**	-6.4
601													71.9	**75.4**	-4.7			
594							75.0	**79.9**	-6.2									
588	116.81	**110.3**	+5.9													102.3	**109.0**	-6.2
Method	7			7			7			7			7			7		
mean			+5.6			-2.6			-5.2			-0.5			-4.4			-5.0
A score	49			52			53			54			51			57		
B score	-0.0			-0.7			-0.8			-1.2			-1.9			-2.6		
C score	3.2			3.4			3.6			3.6			2.9			3.0		









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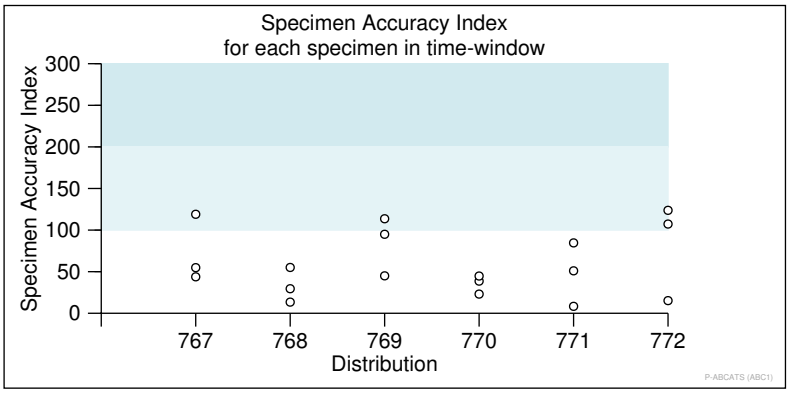
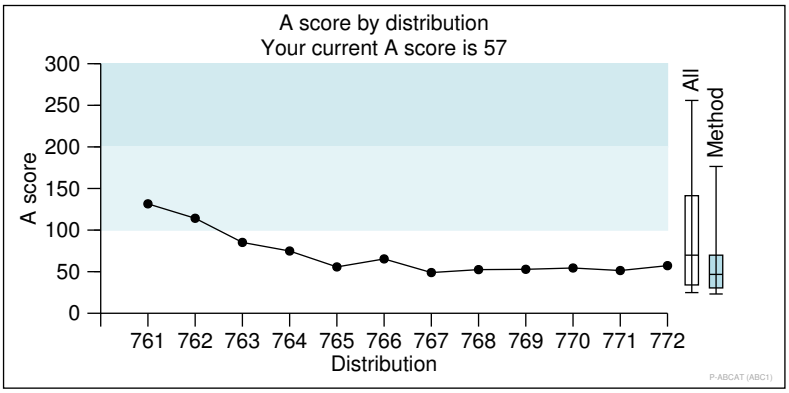
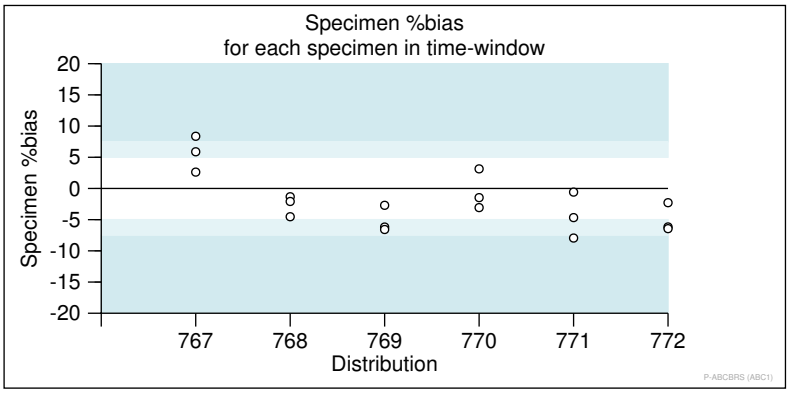
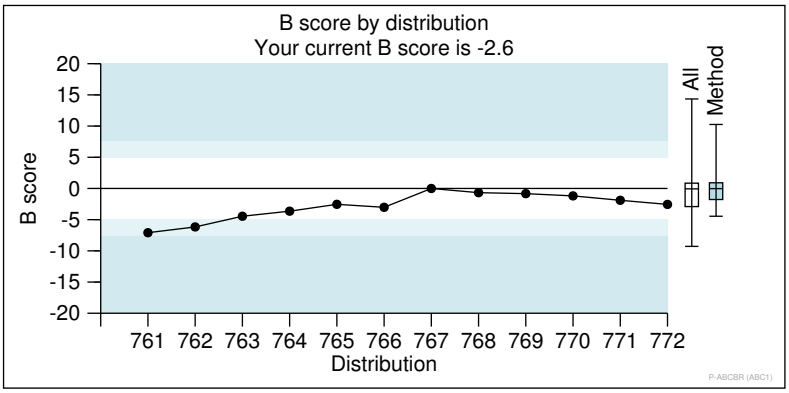
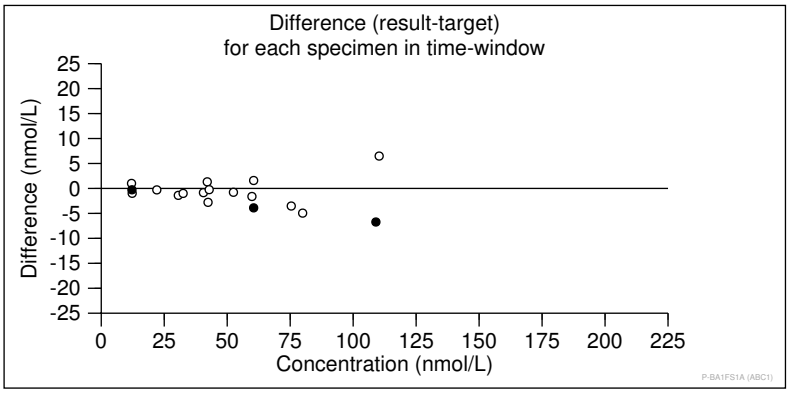
Cadmium nmol/L

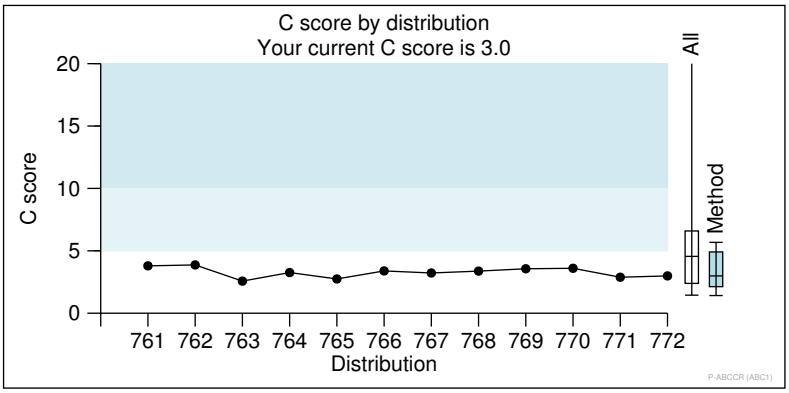


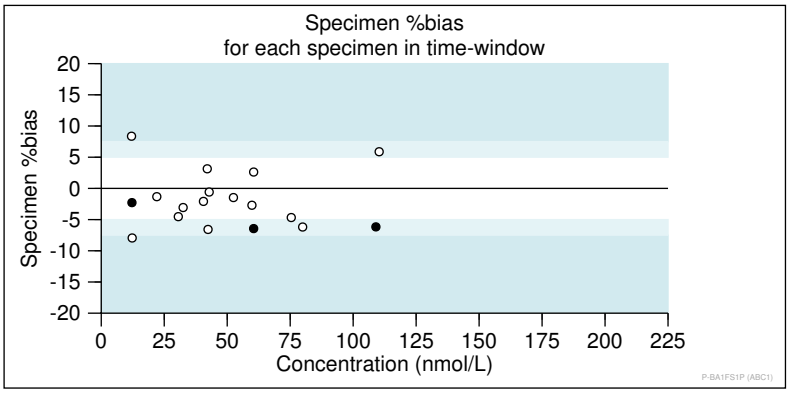


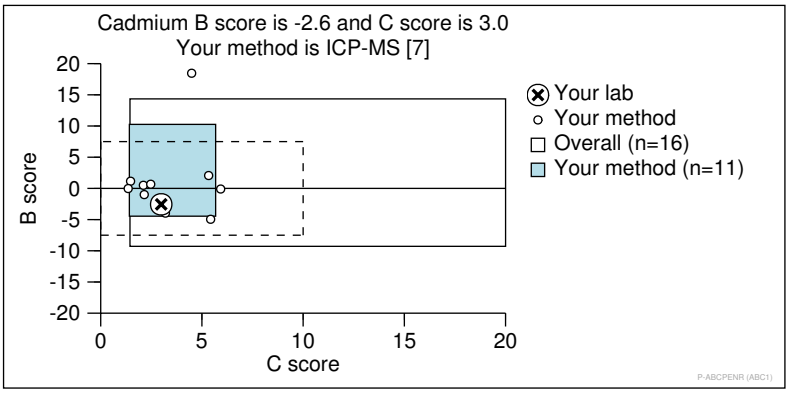


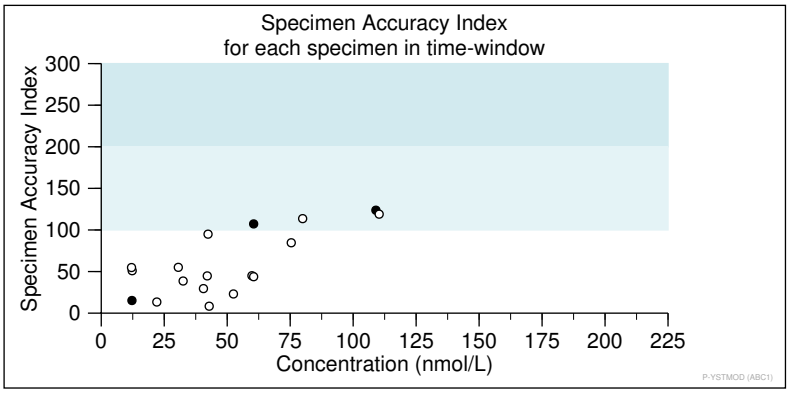


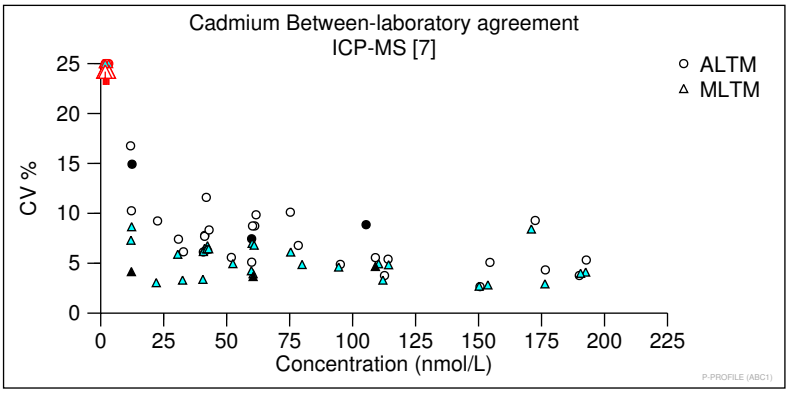












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