

**EXPERTISE AND SERVICE PROVISION
QUALITY OF LABORATORIES**

**CLINICAL BIOLOGY COMMISSION
COMMITTEE OF EXPERTS**

**EXTERNAL QUALITY ASSESSMENT
IN CLINICAL BIOLOGY**

ANNUAL REPORT

Trace elements

2019

Sciensano/Trace elements/12

Expertise and service provision
Quality of laboratories
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All the reports are also available on our webpage:

https://www.wiv-isp.be/QML/activities/external_quality/rapports/_nl/rapports_annee.htm

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STATISTICS

Participants at these surveys were originated from Belgium, France, Italy, Spain, the Netherlands and Australia. In order to evaluate the Belgian labs, the results of all the participants were considered and the following statistics were performed.

The target value is the median per method (M_m) if $N_m \geq 6$ or the global median (M_g) when $N_m < 6$ and $N_g \geq 6$. If $N_g < 6$, no evaluation was possible.

For a specific element and a particular sample, M_m is the median of the participants using the same method and M_g is the median of all the participants. In the same way, N_m is the number of encoded results per method and N_g is the number of encoded.

The spread of the data was estimated using a robust standard deviation (SD): $SD = (P_{75} - P_{25})/1.349$

For a specific element and a particular sample, SD_m is the standard deviation of the encoded results per method and SD_g is the standard deviation of all encoded results.

In individual reports, your Z score was calculated per element and per sample.

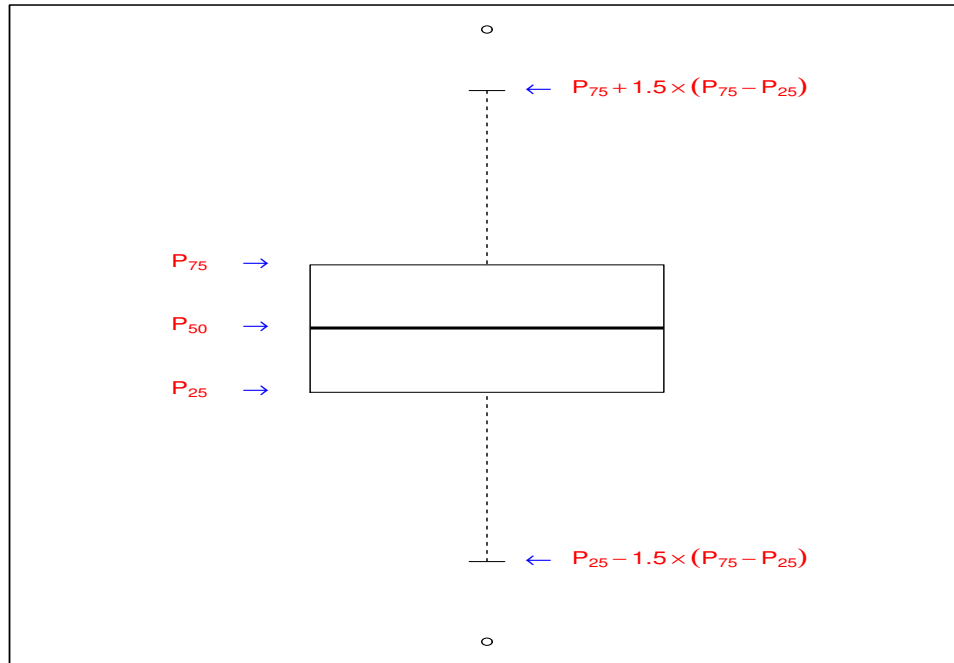
$$Z = \begin{cases} (R - M_m)/SD_m & \text{when } N_m \geq 6 \\ (R - M_g)/SD_g & \text{when } N_m < 6 \text{ and } N_g \geq 6 \end{cases}$$

Where, R is your result.

When $|Z| > 3$ the result was considered as an outlier.

GRAPHICAL REPRESENTATION

For a specific element and a particular sample, The box plot includes all the results for all the labs (Belgian and non Belgian). The results of the Belgian labs are indicated by method (using a colour code) on the graph.



- a rectangle that ranges from the percentile 25 (P_{25}) to the percentile 75 (P_{75})
- a central line that shows the median of the results (P_{50})
- a lower limit corresponding to $P_{25} - 1.5 * (P_{75} - P_{25})$
- an upper limit corresponding to $P_{75} + 1.5 * (P_{75} - P_{25})$

ABBREVIATIONS

We use the following abbreviations throughout the report:

- ETAAS: Electro thermal Atomic Absorption Spectrometry
- FAAS : Flame Atomic Absorption Spectrometry
- GA: All results for all methods
- ICP-MS : Inductively Coupled Plasma Mass Spectrometry
- MA: All results per method
- N: Number of results for all participants from all countries
- NBE : Number of results from Belgian labs eventually followed by a number in brackets referring to the number of labs evaluated using global statistics
- NC: Number of citations ($|Z| > 3$)
- NE: Number of not evaluated results
- NG: Number of good answers ($|Z| \leq 3$)
- SD: Standard deviation

THE SAMPLES AND THE DATA PROCESSING

24 samples per matrix (Serum, whole blood, urine) were sent to the lab under dry ice.

The samples were purchased by SKML, Winterwijk, Netherlands.

Two samples must be analyzed per month from April 2019 to March 2020. The results were encoded via the web page: www.trace-elements.eu.

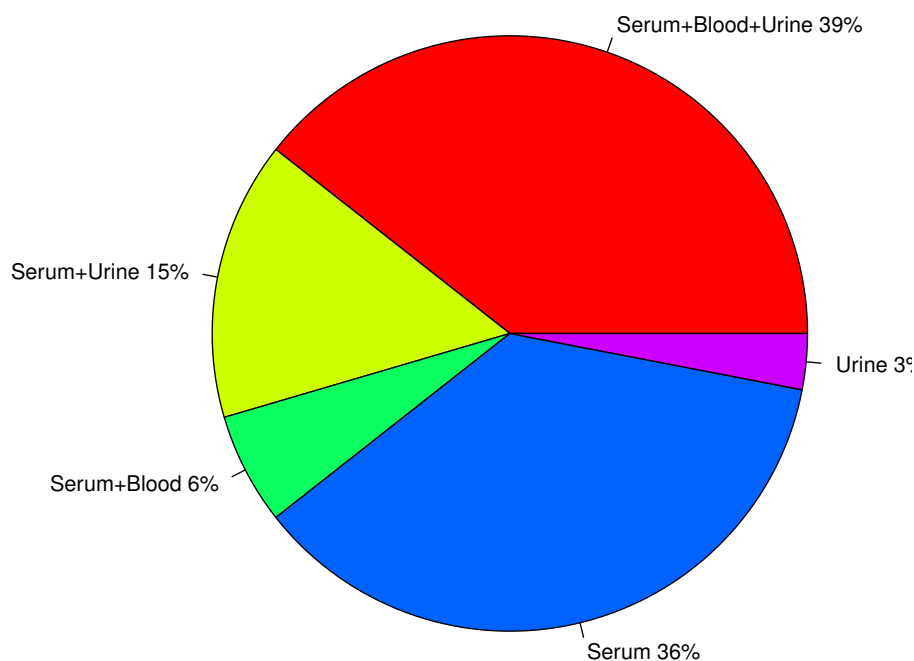
The laboratories obtained from this site an individual report, a monthly report and an annual report.

Sciensano produced individual annual reports and this global annual report.

PARTICIPATION

- | | |
|-----|---|
| 178 | participants from 6 countries, 33 of which are belgian, participated to the EQA |
| 13 | belgian laboratories for serum, blood and urine |
| 5 | belgian laboratories for serum and urine |
| 2 | belgian laboratories for serum and blood |
| 12 | belgian laboratories for serum alone |
| 1 | belgian laboratory for urine alone |

Repartition (%) of the belgian participants according to the matrix analysed



1 TRACE ELEMENTS IN URINE

1.1 PARTICIPATION

19 laboratories participated to the EQA for urine matrix.

Parameter	N labs	Recorded results	Expected number of results	percentage
Al	5	87	120	72.5 %
As	6	131	144	90.97 %
Be	2	48	48	100 %
Cd	9	202	216	93.52 %
Co	8	180	192	93.75 %
Cr	8	178	192	92.71 %
Cu	10	224	240	93.33 %
Hg	6	131	144	90.97 %
I	6	135	144	93.75 %
Mg	8	180	192	93.75 %
Mn	8	180	192	93.75 %
Ni	8	180	192	93.75 %
Pb	10	221	240	92.08 %
Sb	4	96	96	100 %
Se	7	136	168	80.95 %
Tl	7	156	168	92.86 %
V	6	132	144	91.67 %
Zn	10	236	240	98.33 %
Total		2833	3072	92.22

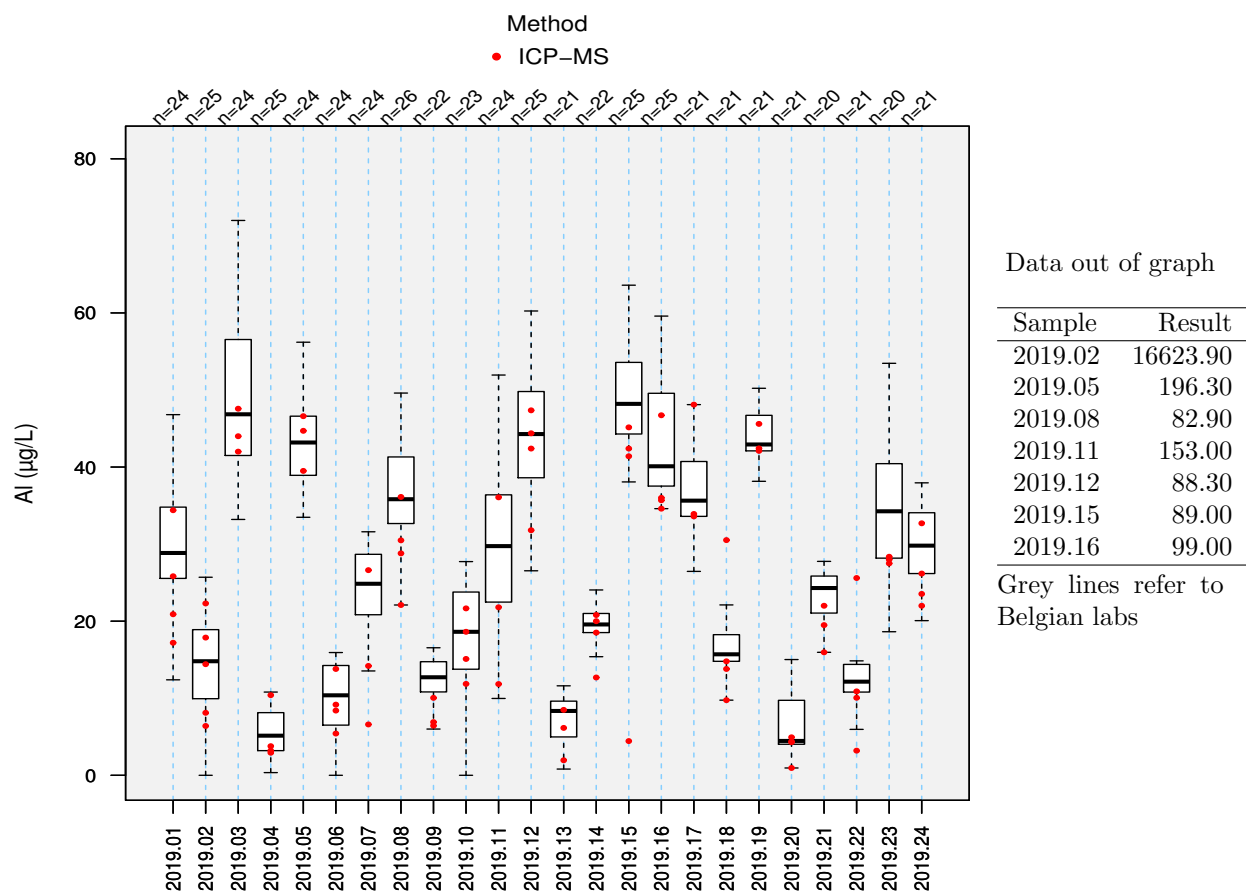
1.2 GLOBAL RESULTS

STAT	Element	Total number of results	Number of evaluated results	Number of Z citations	% citations
MA	Al	87	87	6	6.9
MA	As	131	131	4	3.05
MA	Be	48	48	2	4.17
MA	Cd	202	154	24	15.58
MA+GA	Cd	202	202 (+48)	34 (+10)	16.83
MA	Co	180	158	6	3.8
MA+GA	Co	180	180 (+22)	12 (+6)	6.67
MA	Cr	178	156	9	5.77
MA+GA	Cr	178	178 (+22)	19 (+10)	10.67
MA	Cu	224	224	11	4.91
MA	Hg	131	109	6	5.5
MA+GA	Hg	131	131 (+22)	7 (+1)	5.34
MA	I	135	111	3	2.7
MA+GA	I	135	135 (+24)	9 (+6)	6.67
MA	Mg	180	158	11	6.96
MA+GA	Mg	180	180 (+22)	11	6.11
MA	Mn	180	156	21	13.46
MA+GA	Mn	180	180 (+24)	27 (+6)	15
MA	Ni	180	156	7	4.49
MA+GA	Ni	180	180 (+24)	15 (+8)	8.33
MA	Pb	221	221	21	9.5
MA	Sb	96	96	6	6.25
MA	Se	136	136	10	7.35
MA	Tl	156	156	20	12.82
MA	V	132	132	4	3.03
MA	Zn	236	236	39	16.53
Total	MA+GA	2833	2833	257	9.07
	MA	2833	2625	210	8

1.3 RESULTS PER ELEMENT

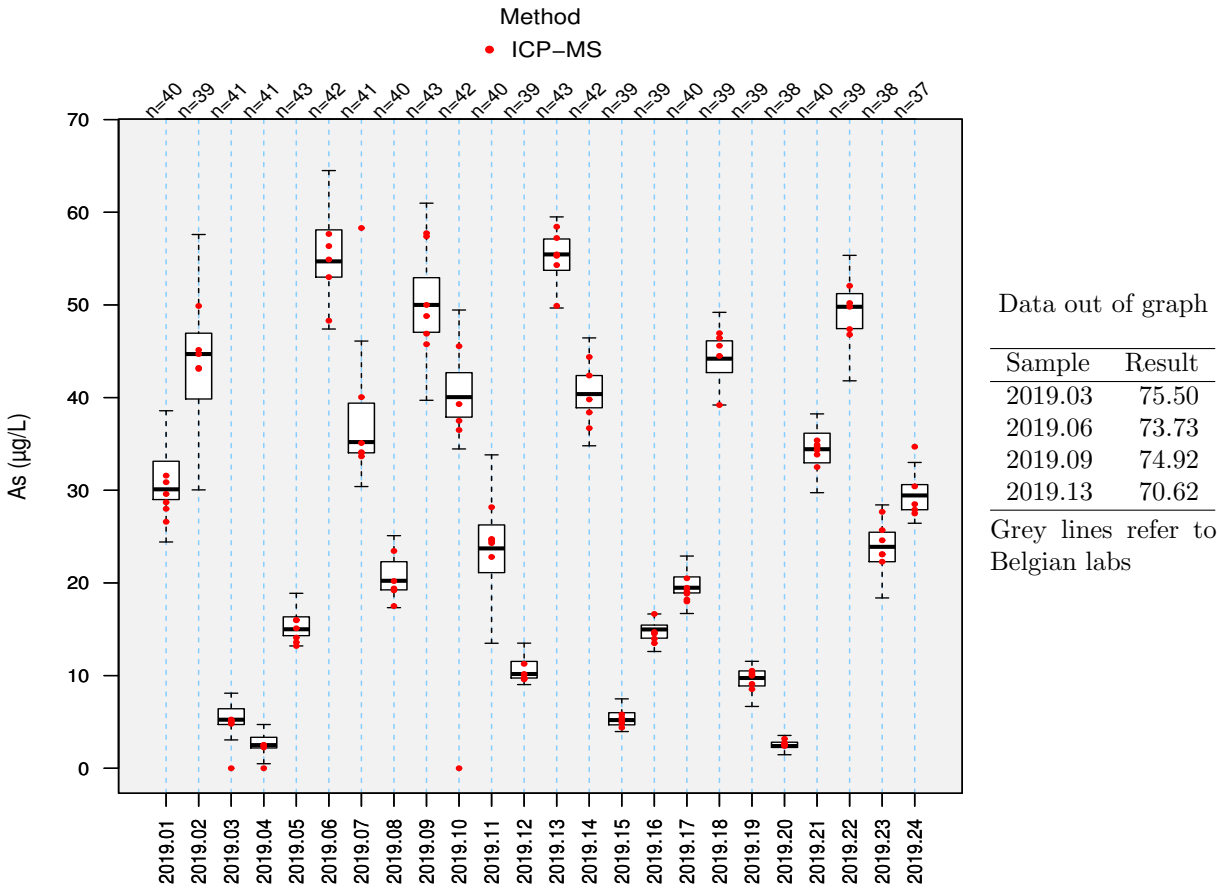
1.3.1 Al

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	29.2	6.86	23	4	4	0	0
2019.02	ICP-MS	14.82	5.84	24	5	5	0	0
2019.03	ICP-MS	47.25	10.04	23	3	3	0	0
2019.04	ICP-MS	5.42	3.38	24	4	4	0	0
2019.05	ICP-MS	42.36	5.6	23	3	3	0	0
2019.06	ICP-MS	10.26	5.07	23	4	4	0	0
2019.07	ICP-MS	25.12	5.69	23	3	2	1	0
2019.08	ICP-MS	36.12	6.2	25	4	4	0	0
2019.09	ICP-MS	12.74	2.52	21	3	3	0	0
2019.10	ICP-MS	19.11	6.48	22	4	4	0	0
2019.11	ICP-MS	29.27	9.94	23	3	3	0	0
2019.12	ICP-MS	43.47	8.04	24	4	4	0	0
2019.13	ICP-MS	8.14	3.52	20	3	3	0	0
2019.14	ICP-MS	19.44	1.84	21	4	3	1	0
2019.15	ICP-MS	48.13	6.12	24	4	3	1	0
2019.16	ICP-MS	40	7.92	24	4	4	0	0
2019.17	ICP-MS	35.64	5.28	21	3	3	0	0
2019.18	ICP-MS	15.7	2.56	21	4	3	1	0
2019.19	ICP-MS	42.93	3.42	21	3	3	0	0
2019.20	ICP-MS	4.46	4.23	21	4	4	0	0
2019.21	ICP-MS	24.3	2.97	20	3	3	0	0
2019.22	ICP-MS	12.15	2.66	21	4	2	2	0
2019.23	ICP-MS	34.26	8.9	20	3	3	0	0
2019.24	ICP-MS	29.8	5.85	21	4	4	0	0



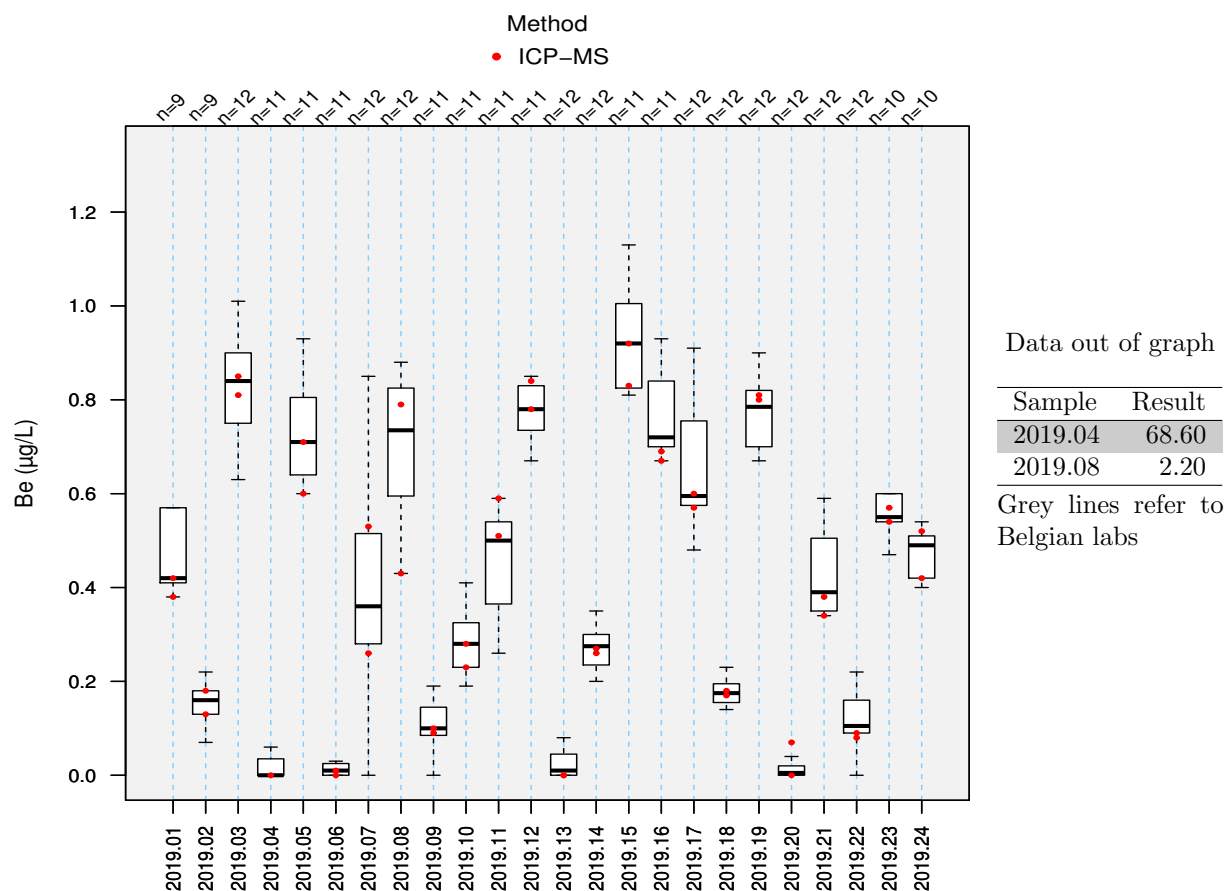
1.3.2 As

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	30	2.69	39	6	6	0	0
2019.02	ICP-MS	44.49	4.93	38	5	5	0	0
2019.03	ICP-MS	5.25	1.23	40	6	5	1	0
2019.04	ICP-MS	2.51	0.83	40	5	4	1	0
2019.05	ICP-MS	15.03	1.47	42	6	6	0	0
2019.06	ICP-MS	54.5	3.45	41	5	5	0	0
2019.07	ICP-MS	35.15	4.07	40	6	5	1	0
2019.08	ICP-MS	20.23	2.18	39	5	5	0	0
2019.09	ICP-MS	50.08	4.62	42	6	6	0	0
2019.10	ICP-MS	40.09	3.49	41	5	4	1	0
2019.11	ICP-MS	23.81	3.31	39	6	6	0	0
2019.12	ICP-MS	10.14	1.42	38	5	5	0	0
2019.13	ICP-MS	55.38	2.61	42	6	6	0	0
2019.14	ICP-MS	40.46	2.58	41	5	5	0	0
2019.15	ICP-MS	5.2	0.97	38	5	5	0	0
2019.16	ICP-MS	14.98	1.09	38	5	5	0	0
2019.17	ICP-MS	19.48	1.28	39	6	6	0	0
2019.18	ICP-MS	44.23	2.65	38	5	5	0	0
2019.19	ICP-MS	9.82	1.25	38	6	6	0	0
2019.20	ICP-MS	2.4	0.42	37	5	5	0	0
2019.21	ICP-MS	34.46	2.37	39	6	6	0	0
2019.22	ICP-MS	49.85	2.76	38	5	5	0	0
2019.23	ICP-MS	23.82	2.36	37	6	6	0	0
2019.24	ICP-MS	29.44	2.01	36	5	5	0	0



1.3.3 Be

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	0.42	0.12	9	2	2	0	0
2019.02	ICP-MS	0.16	0.04	9	2	2	0	0
2019.03	ICP-MS	0.84	0.09	12	2	2	0	0
2019.04	ICP-MS	0	0.03	11	2	1	1	0
2019.05	ICP-MS	0.71	0.12	11	2	2	0	0
2019.06	ICP-MS	0.01	0.02	11	2	2	0	0
2019.07	ICP-MS	0.36	0.16	12	2	2	0	0
2019.08	ICP-MS	0.74	0.16	12	2	2	0	0
2019.09	ICP-MS	0.1	0.04	11	2	2	0	0
2019.10	ICP-MS	0.28	0.07	11	2	2	0	0
2019.11	ICP-MS	0.5	0.13	11	2	2	0	0
2019.12	ICP-MS	0.78	0.07	11	2	2	0	0
2019.13	ICP-MS	0.01	0.03	12	2	2	0	0
2019.14	ICP-MS	0.28	0.05	12	2	2	0	0
2019.15	ICP-MS	0.92	0.13	11	2	2	0	0
2019.16	ICP-MS	0.72	0.1	11	2	2	0	0
2019.17	ICP-MS	0.6	0.11	12	2	2	0	0
2019.18	ICP-MS	0.18	0.03	12	2	2	0	0
2019.19	ICP-MS	0.78	0.09	12	2	2	0	0
2019.20	ICP-MS	0	0.01	12	2	1	1	0
2019.21	ICP-MS	0.39	0.11	12	2	2	0	0
2019.22	ICP-MS	0.11	0.04	12	2	2	0	0
2019.23	ICP-MS	0.55	0.04	10	2	2	0	0
2019.24	ICP-MS	0.49	0.06	10	2	2	0	0

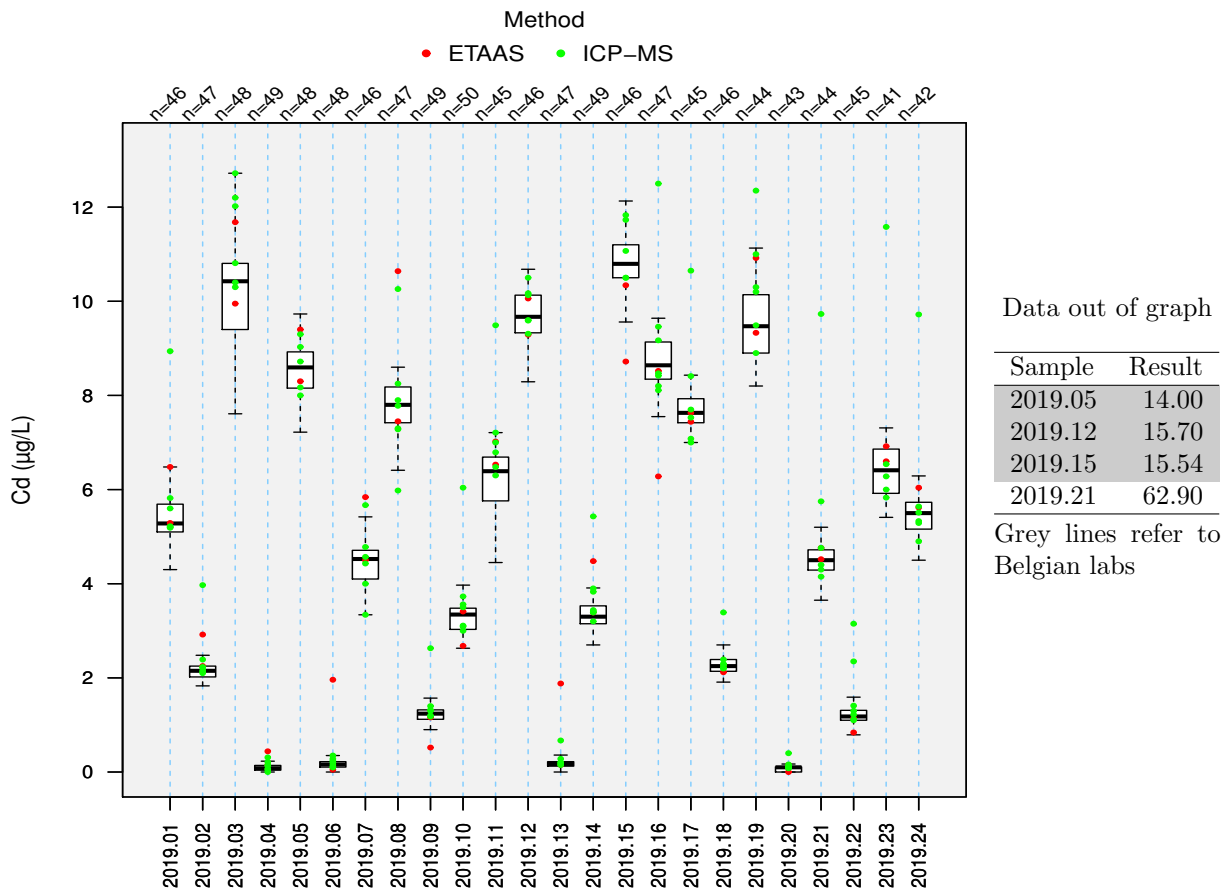


1.3.4 Cd

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	5.46	0.47	4	2	0	0	2
2019.01	ICP-MS	5.28	0.42	41	6	5	1	0
2019.01	Global	5.28	0.42	46	8	7	1	0
2019.02	ETAAS	2.3	0.33	4	2	0	0	2
2019.02	ICP-MS	2.15	0.17	42	7	6	1	0
2019.02	Global	2.15	0.17	47	9	7	2	0
2019.03	ETAAS	10.12	0.54	5	2	0	0	2
2019.03	ICP-MS	10.45	1.04	43	6	6	0	0
2019.03	Global	10.43	1.01	48	8	8	0	0
2019.04	ETAAS	0.04	0.11	5	2	0	0	2
2019.04	ICP-MS	0.08	0.07	44	7	6	1	0
2019.04	Global	0.08	0.07	49	9	7	2	0
2019.05	ETAAS	8.51	0.43	5	2	0	0	2
2019.05	ICP-MS	8.6	0.57	43	6	5	1	0
2019.05	Global	8.59	0.55	48	8	7	1	0
2019.06	ETAAS	0.04	0.04	5	2	0	0	2
2019.06	ICP-MS	0.17	0.08	43	7	7	0	0
2019.06	Global	0.16	0.08	48	9	8	1	0
2019.07	ETAAS	4.66	0.45	4	2	0	0	2
2019.07	ICP-MS	4.53	0.42	42	6	6	0	0
2019.07	Global	4.53	0.41	46	8	7	1	0
2019.08	ETAAS	8.56	1.83	4	2	0	0	2
2019.08	ICP-MS	7.8	0.57	43	7	5	2	0
2019.08	Global	7.8	0.56	47	9	6	3	0
2019.09	ETAAS	1.16	0.25	5	2	0	0	2
2019.09	ICP-MS	1.24	0.11	43	6	5	1	0
2019.09	Global	1.24	0.15	49	8	6	2	0
2019.10	ETAAS	3.41	0.16	5	2	0	0	2
2019.10	ICP-MS	3.34	0.32	44	7	6	1	0
2019.10	Global	3.34	0.33	50	9	8	1	0
2019.11	ETAAS	6.7	0.28	4	2	0	0	2
2019.11	ICP-MS	6.35	0.85	41	6	5	1	0
2019.11	Global	6.39	0.69	45	8	7	1	0
2019.12	ETAAS	9.87	0.62	4	2	0	0	2
2019.12	ICP-MS	9.67	0.58	42	7	6	1	0
2019.12	Global	9.67	0.58	46	9	8	1	0
2019.13	ETAAS	0.08	0.43	4	2	0	0	2
2019.13	ICP-MS	0.19	0.07	43	6	5	1	0
2019.13	Global	0.17	0.07	47	8	6	2	0
2019.14	ETAAS	3.38	0.22	4	2	0	0	2
2019.14	ICP-MS	3.26	0.28	45	7	6	1	0
2019.14	Global	3.3	0.28	49	9	7	2	0
2019.15	ETAAS	10.51	1.03	4	2	0	0	2
2019.15	ICP-MS	10.8	0.51	42	6	5	1	0
2019.15	Global	10.8	0.52	46	8	6	2	0
2019.16	ETAAS	8.47	0.89	4	2	0	0	2
2019.16	ICP-MS	8.64	0.59	43	7	6	1	0
2019.16	Global	8.64	0.59	47	9	7	2	0
2019.17	ETAAS	7.75	0.21	4	2	0	0	2
2019.17	ICP-MS	7.59	0.47	40	6	5	1	0
2019.17	Global	7.63	0.38	45	8	7	1	0
2019.18	ETAAS	2.14	0.03	4	2	0	0	2
2019.18	ICP-MS	2.27	0.2	41	7	6	1	0
2019.18	Global	2.25	0.18	46	9	8	1	0
2019.19	ETAAS	10.29	1.03	4	2	0	0	2
2019.19	ICP-MS	9.45	0.84	40	6	5	1	0
2019.19	Global	9.47	0.91	44	8	7	1	0
2019.20	ETAAS	0	0.03	4	2	0	0	2
2019.20	ICP-MS	0.1	0.05	39	7	6	1	0
2019.20	Global	0.1	0.08	43	9	8	1	0
2019.21	ETAAS	4.62	0.16	4	2	0	0	2

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.21	ICP-MS	4.46	0.34	40	6	4	2	0
2019.21	Global	4.5	0.32	44	8	6	2	0
2019.22	ETAAS	0.99	0.25	4	2	0	0	2
2019.22	ICP-MS	1.21	0.16	41	7	5	2	0
2019.22	Global	1.18	0.16	45	9	7	2	0
2019.23	ETAAS	6.78	0.29	4	2	0	0	2
2019.23	ICP-MS	6.31	0.73	37	5	4	1	0
2019.23	Global	6.41	0.7	41	7	6	1	0
2019.24	ETAAS	5.83	0.38	4	2	0	0	2
2019.24	ICP-MS	5.45	0.43	38	6	5	1	0
2019.24	Global	5.5	0.42	42	8	7	1	0

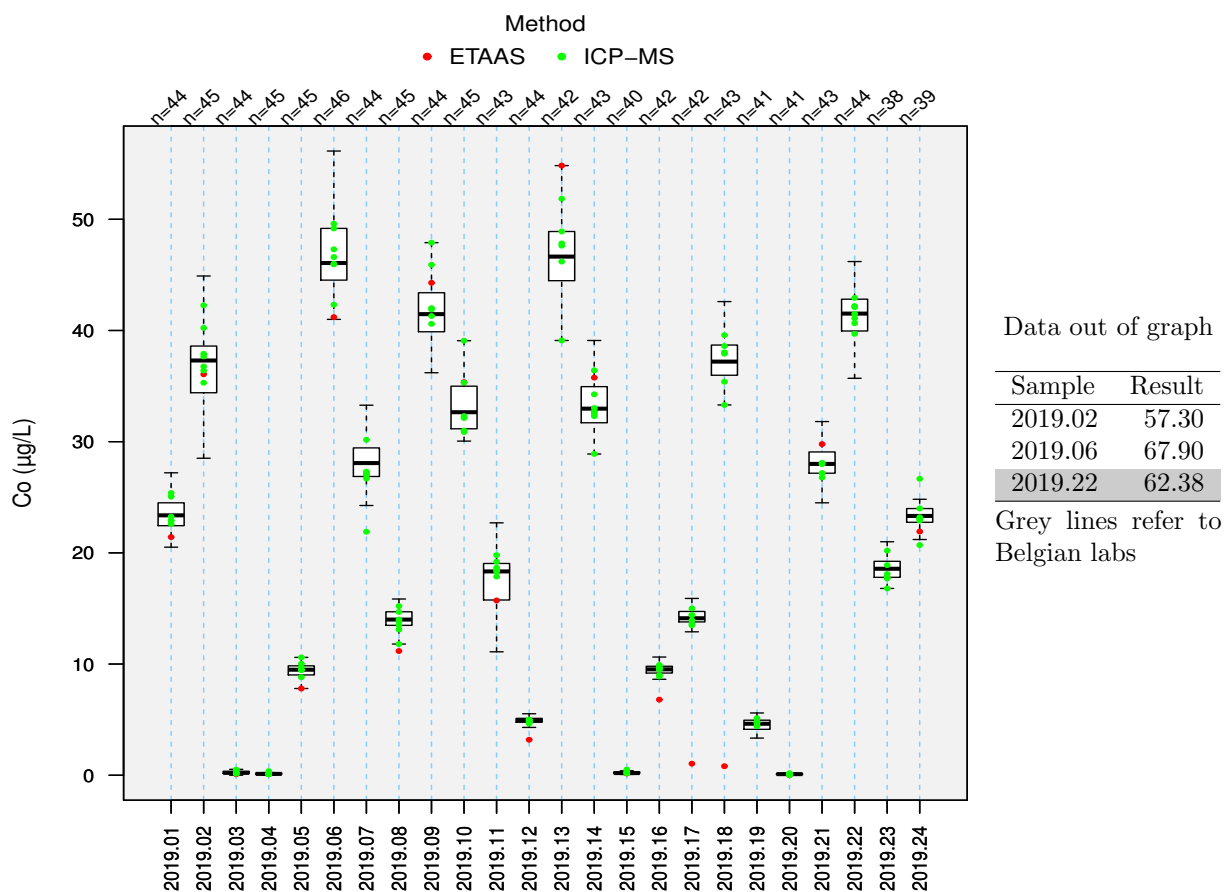


1.3.5 Co

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	22.8	1.75	6	1	1	0	0
2019.01	ICP-MS	23.38	1.42	38	6	6	0	0
2019.02	ETAAS	35.33	2.05	6	1	1	0	0
2019.02	ICP-MS	37.4	3.04	39	7	7	0	0
2019.03	ETAAS	0.78	0.67	5	1	0	0	1
2019.03	ICP-MS	0.21	0.09	39	6	5	1	0
2019.03	Global	0.22	0.12	44	7	7	0	0
2019.04	ETAAS	0.56	0.59	5	1	0	0	1
2019.04	ICP-MS	0.12	0.06	40	7	6	1	0
2019.04	Global	0.12	0.08	45	8	7	1	0
2019.05	ETAAS	7.8	1.12	5	1	0	0	1
2019.05	ICP-MS	9.53	0.66	40	6	6	0	0
2019.05	Global	9.49	0.61	45	7	7	0	0
2019.06	ETAAS	44.3	3.4	5	1	0	0	1
2019.06	ICP-MS	46.44	2.97	41	7	7	0	0
2019.06	Global	46.07	3.34	46	8	8	0	0
2019.07	ETAAS	29.3	1.76	5	1	0	0	1
2019.07	ICP-MS	28	1.79	39	6	5	1	0
2019.07	Global	28.07	1.87	44	7	6	1	0
2019.08	ETAAS	13.4	2.11	5	1	0	0	1
2019.08	ICP-MS	14.05	0.85	40	7	7	0	0
2019.08	Global	14	0.9	45	8	7	1	0
2019.09	ETAAS	42.43	2.59	5	1	0	0	1
2019.09	ICP-MS	41.44	2.29	39	6	6	0	0
2019.09	Global	41.47	2.46	44	7	7	0	0
2019.10	ETAAS	33.1	1.95	5	1	0	0	1
2019.10	ICP-MS	32.47	2.69	40	7	7	0	0
2019.10	Global	32.65	2.84	45	8	8	0	0
2019.11	ETAAS	19.42	2.77	5	1	0	0	1
2019.11	ICP-MS	18.27	2.17	38	6	6	0	0
2019.11	Global	18.33	2.44	43	7	7	0	0
2019.12	ETAAS	5.4	1.31	5	1	0	0	1
2019.12	ICP-MS	4.93	0.2	39	7	7	0	0
2019.12	Global	4.94	0.25	44	8	7	1	0
2019.13	ETAAS	46.44	4.5	3	1	0	0	1
2019.13	ICP-MS	46.85	2.93	39	6	6	0	0
2019.13	Global	46.64	3.1	42	7	7	0	0
2019.14	ETAAS	35.76	2.41	3	1	0	0	1
2019.14	ICP-MS	32.88	2.23	40	7	7	0	0
2019.14	Global	32.97	2.41	43	8	8	0	0
2019.15	ETAAS	0.18	0.14	4	1	0	0	1
2019.15	ICP-MS	0.2	0.08	36	6	5	1	0
2019.15	Global	0.2	0.08	40	7	6	1	0
2019.16	ETAAS	9.12	0.85	4	1	0	0	1
2019.16	ICP-MS	9.57	0.49	38	7	7	0	0
2019.16	Global	9.53	0.45	42	8	7	1	0
2019.17	ETAAS	11.98	5.91	4	1	0	0	1
2019.17	ICP-MS	14.12	0.69	38	6	6	0	0
2019.17	Global	14.12	0.69	42	7	6	1	0
2019.18	ETAAS	26.55	9.51	4	1	0	0	1
2019.18	ICP-MS	37.64	1.92	39	7	7	0	0
2019.18	Global	37.2	2.01	43	8	7	1	0
2019.19	ETAAS	4.28	0.41	4	1	0	0	1
2019.19	ICP-MS	4.64	0.51	37	6	6	0	0
2019.19	Global	4.63	0.61	41	7	7	0	0
2019.20	ETAAS	0.22	0.55	4	1	0	0	1
2019.20	ICP-MS	0.1	0.05	37	7	7	0	0
2019.20	Global	0.1	0.06	41	8	8	0	0
2019.21	ETAAS	28.55	1.26	4	1	0	0	1
2019.21	ICP-MS	27.97	1.27	39	6	6	0	0
2019.21	Global	28	1.42	43	7	7	0	0

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.22	ETAAS	41.83	5.91	4	1	0	0	1
2019.22	ICP-MS	41.52	1.97	40	7	7	0	0
2019.22	Global	41.52	2.06	44	8	7	1	0
2019.23	ETAAS	17.8	0.61	3	1	0	0	1
2019.23	ICP-MS	18.58	1.02	35	6	6	0	0
2019.23	Global	18.57	1.06	38	7	7	0	0
2019.24	ETAAS	21.92	2.72	3	1	0	0	1
2019.24	ICP-MS	23.41	0.87	36	7	5	2	0
2019.24	Global	23.32	0.92	39	8	7	1	0

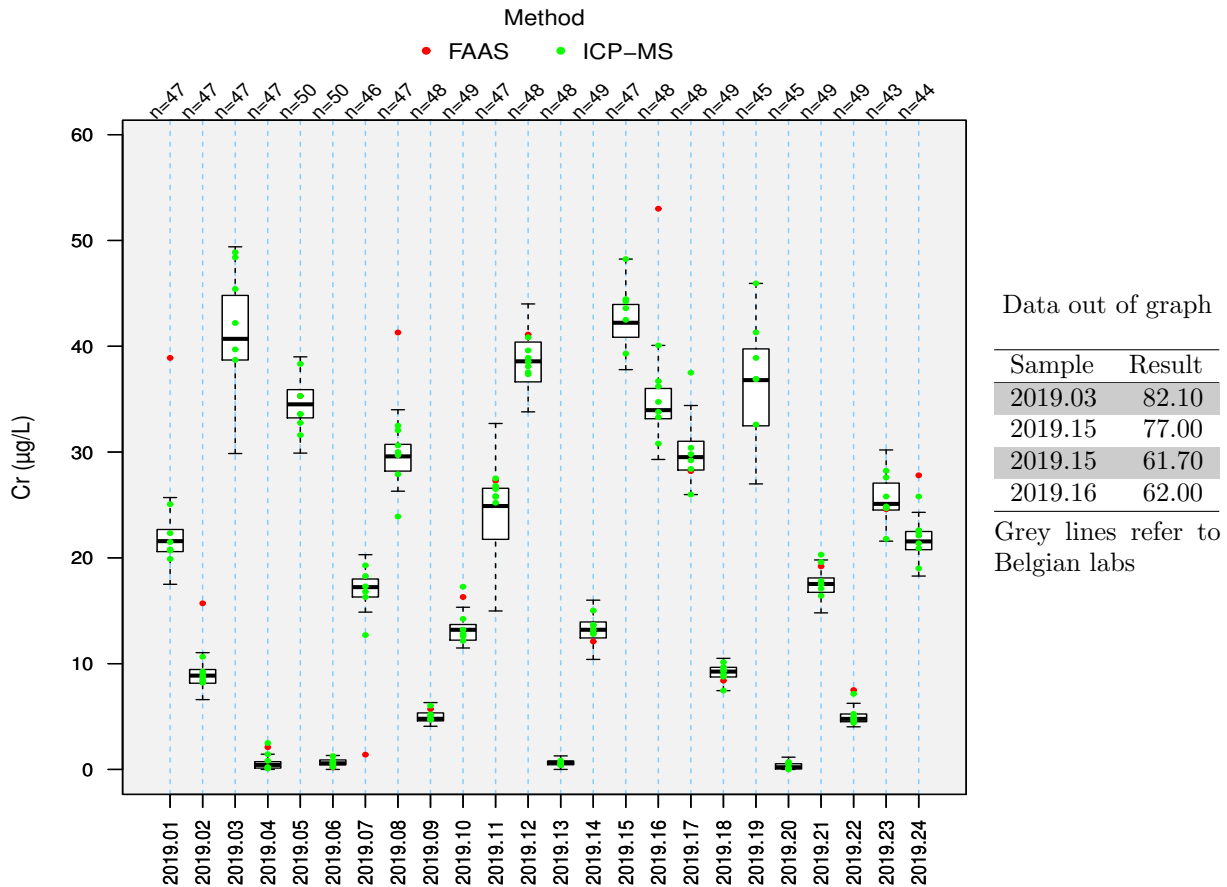


1.3.6 Cr

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	FAAS	38.9	0	1	1	0	0	1
2019.01	ICP-MS	21.58	1.23	37	6	6	0	0
2019.01	Global	21.58	1.55	47	7	6	1	0
2019.02	FAAS	15.7	0	1	1	0	0	1
2019.02	ICP-MS	8.87	0.99	37	7	7	0	0
2019.02	Global	8.87	0.96	47	8	7	1	0
2019.03	FAAS	82.1	0	1	1	0	0	1
2019.03	ICP-MS	40.63	4.07	38	6	6	0	0
2019.03	Global	40.7	4.53	47	7	6	1	0
2019.04	FAAS	2.1	0	1	1	0	0	1
2019.04	ICP-MS	0.26	0.42	38	7	6	1	0
2019.04	Global	0.43	0.45	47	8	6	2	0
2019.05	FAAS	33.15	1.59	2	1	0	0	1
2019.05	ICP-MS	34.51	1.74	40	6	6	0	0
2019.05	Global	34.51	1.9	50	7	7	0	0
2019.06	FAAS	0.75	0.41	2	1	0	0	1
2019.06	ICP-MS	0.58	0.27	40	7	7	0	0
2019.06	Global	0.58	0.33	50	8	8	0	0
2019.07	FAAS	1.4	0	1	1	0	0	1
2019.07	ICP-MS	17.16	1.1	37	6	5	1	0
2019.07	Global	17.23	1.22	46	7	5	2	0
2019.08	FAAS	41.3	0	1	1	0	0	1
2019.08	ICP-MS	29.54	1.84	38	7	6	1	0
2019.08	Global	29.59	1.87	47	8	6	2	0
2019.09	FAAS	5.2	0.37	2	1	0	0	1
2019.09	ICP-MS	4.8	0.57	38	6	6	0	0
2019.09	Global	4.79	0.5	48	7	7	0	0
2019.10	FAAS	14.05	1.67	2	1	0	0	1
2019.10	ICP-MS	13.21	0.94	39	7	6	1	0
2019.10	Global	13.2	1.1	49	8	7	1	0
2019.11	FAAS	27.3	0	1	1	0	0	1
2019.11	ICP-MS	24.88	3.61	38	6	6	0	0
2019.11	Global	24.9	3.58	47	7	7	0	0
2019.12	FAAS	41.1	0	1	1	0	0	1
2019.12	ICP-MS	38.7	2.59	39	7	7	0	0
2019.12	Global	38.58	2.75	48	8	8	0	0
2019.13	FAAS	0.8	0.07	2	1	0	0	1
2019.13	ICP-MS	0.64	0.24	38	6	6	0	0
2019.13	Global	0.66	0.25	48	7	7	0	0
2019.14	FAAS	11.25	0.63	2	1	0	0	1
2019.14	ICP-MS	13.21	0.87	40	7	7	0	0
2019.14	Global	13.2	1.12	49	8	8	0	0
2019.15	FAAS	61.7	0	1	1	0	0	1
2019.15	ICP-MS	42.22	1.99	37	6	5	1	0
2019.15	Global	42.22	2.3	47	7	6	1	0
2019.16	FAAS	53	0	1	1	0	0	1
2019.16	ICP-MS	33.88	1.73	38	7	6	1	0
2019.16	Global	33.96	2.04	48	8	7	1	0
2019.17	FAAS	27.5	0.52	2	1	0	0	1
2019.17	ICP-MS	29.85	1.56	38	6	5	1	0
2019.17	Global	29.52	1.97	48	7	6	1	0
2019.18	FAAS	8.55	0.11	2	1	0	0	1
2019.18	ICP-MS	9.25	0.68	39	7	7	0	0
2019.18	Global	9.25	0.67	49	8	8	0	0
2019.19	ICP-MS	36.9	5.48	37	6	6	0	0
2019.20	ICP-MS	0.17	0.3	37	7	7	0	0
2019.21	FAAS	18.35	0.63	2	1	0	0	1
2019.21	ICP-MS	17.67	0.97	39	6	6	0	0
2019.21	Global	17.53	1.01	49	7	7	0	0
2019.22	FAAS	3.8	2.74	2	1	0	0	1
2019.22	ICP-MS	4.8	0.43	39	7	6	1	0

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.22	Global	4.78	0.54	49	8	6	2	0
2019.23	FAAS	24.6	0	1	1	0	0	1
2019.23	ICP-MS	25.2	1.98	35	6	6	0	0
2019.23	Global	25.1	1.89	43	7	7	0	0
2019.24	FAAS	27.8	0	1	1	0	0	1
2019.24	ICP-MS	21.55	1.24	36	7	6	1	0
2019.24	Global	21.55	1.25	44	8	6	2	0



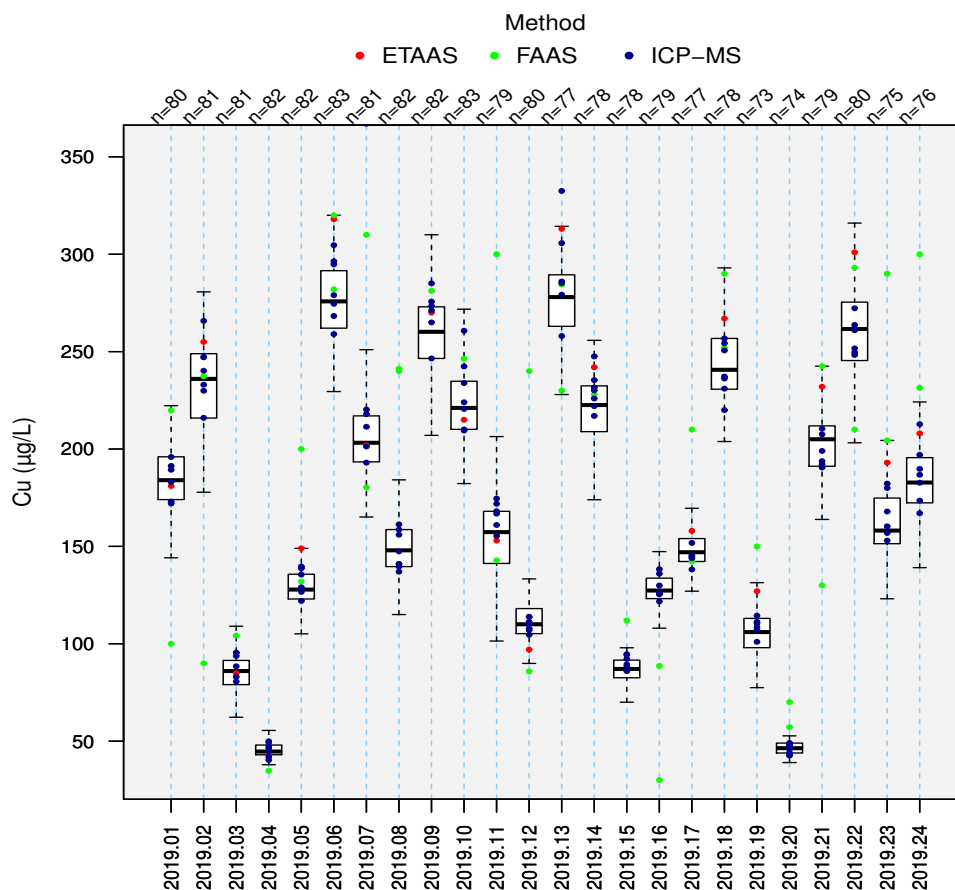
1.3.7 Cu

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	186.9	13.23	15	1	1	0	0
2019.01	FAAS	188.28	16.34	12	2	1	1	0
2019.01	ICP-MS	182.88	13.1	50	6	6	0	0
2019.02	ETAAS	243.21	31.17	15	1	1	0	0
2019.02	FAAS	231.3	25.18	12	2	1	1	0
2019.02	ICP-MS	233	24.28	51	7	7	0	0
2019.03	ETAAS	85.68	8.5	16	1	1	0	0
2019.03	FAAS	87	8.88	9	1	1	0	0
2019.03	ICP-MS	86	9.17	53	6	6	0	0
2019.04	ETAAS	43.2	5.94	16	1	1	0	0
2019.04	FAAS	44.45	5.46	9	1	1	0	0
2019.04	ICP-MS	45.09	2.85	54	7	7	0	0
2019.05	ETAAS	124.23	16.18	16	1	1	0	0
2019.05	FAAS	128.27	20.47	11	2	1	1	0
2019.05	ICP-MS	127.82	8.61	52	6	6	0	0
2019.06	ETAAS	259.9	25.07	16	1	1	0	0
2019.06	FAAS	282	20.71	11	2	2	0	0
2019.06	ICP-MS	277	19.77	53	7	7	0	0
2019.07	ETAAS	198.43	15.89	16	1	1	0	0
2019.07	FAAS	208.6	23.18	10	2	1	1	0
2019.07	ICP-MS	207.5	17.71	52	6	5	1	0
2019.08	ETAAS	140.99	6.16	16	1	1	0	0
2019.08	FAAS	166.45	26.24	10	2	2	0	0
2019.08	ICP-MS	150	14.08	53	7	7	0	0
2019.09	ETAAS	256.04	17.35	16	1	1	0	0
2019.09	FAAS	273.69	13.1	9	1	1	0	0
2019.09	ICP-MS	259.54	18.49	54	6	6	0	0
2019.10	ETAAS	216.77	7.97	16	1	1	0	0
2019.10	FAAS	231.14	21.19	9	1	1	0	0
2019.10	ICP-MS	223.6	18.44	55	7	7	0	0
2019.11	ETAAS	151.5	25.65	16	1	1	0	0
2019.11	FAAS	164.15	48.23	10	2	2	0	0
2019.11	ICP-MS	158.44	17.37	50	6	6	0	0
2019.12	ETAAS	106.35	13.33	16	1	1	0	0
2019.12	FAAS	117.16	29.77	10	2	1	1	0
2019.12	ICP-MS	110	6.52	51	7	7	0	0
2019.13	ETAAS	270.2	20.11	14	1	1	0	0
2019.13	FAAS	271.78	32.42	9	2	2	0	0
2019.13	ICP-MS	278.26	16.63	51	6	5	1	0
2019.14	ETAAS	221.84	17.74	14	1	1	0	0
2019.14	FAAS	206.38	44.25	9	2	1	1	0
2019.14	ICP-MS	225.47	11.38	52	7	7	0	0
2019.15	ETAAS	84.5	5.41	15	1	1	0	0
2019.15	FAAS	89.54	24.66	9	2	1	1	0
2019.15	ICP-MS	87.63	5.7	51	6	6	0	0
2019.16	ETAAS	126	9.11	15	1	1	0	0
2019.16	FAAS	130.18	16	9	2	1	1	0
2019.16	ICP-MS	127.64	6.71	52	7	7	0	0
2019.17	ETAAS	150.5	10.82	13	1	1	0	0
2019.17	FAAS	153.35	30.97	10	2	2	0	0
2019.17	ICP-MS	146.05	6.64	51	6	6	0	0
2019.18	ETAAS	240	23.76	13	1	1	0	0
2019.18	FAAS	258.69	42.51	10	2	2	0	0
2019.18	ICP-MS	240.22	12.82	52	7	7	0	0
2019.19	ETAAS	100.97	9.85	12	1	1	0	0
2019.19	FAAS	115.61	19.95	8	2	2	0	0
2019.19	ICP-MS	107.47	8.08	50	6	6	0	0
2019.20	ETAAS	45.3	3.28	12	1	1	0	0
2019.20	FAAS	54.58	9.08	8	2	2	0	0
2019.20	ICP-MS	46.48	2.98	51	7	7	0	0
2019.21	ETAAS	205.56	14.31	14	1	1	0	0

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.21	FAAS	205.74	38.07	9	2	2	0	0
2019.21	ICP-MS	202.57	14.41	53	6	6	0	0
2019.22	ETAAS	268.2	27.97	14	1	1	0	0
2019.22	FAAS	231.78	61.6	9	2	2	0	0
2019.22	ICP-MS	261	17.56	54	7	7	0	0
2019.23	ETAAS	161.29	28.11	15	1	1	0	0
2019.23	FAAS	152.4	71.46	9	2	2	0	0
2019.23	ICP-MS	157.5	14.56	48	6	6	0	0
2019.24	ETAAS	182.25	29.42	15	1	1	0	0
2019.24	FAAS	187.33	22.59	9	2	1	1	0
2019.24	ICP-MS	182.88	12.71	49	7	7	0	0

Data out of graph



Sample	Result
2019.01	355.60
2019.02	386.00
2019.02	372.75
2019.02	356.00
2019.03	22.86
2019.04	0.00
2019.05	705.00
2019.07	26.00
2019.07	1110.44
2019.07	367.00
2019.09	11.43
2019.11	28.58
2019.11	32.39
2019.12	0.00
2019.13	0.00
2019.14	0.13
2019.14	0.00
2019.15	0.00
2019.16	30.00
2019.19	7.00
2019.20	0.00
2019.20	0.00
2019.20	21.46
2019.22	405.77
2019.23	437.52
2019.24	27.00
2019.24	573.41

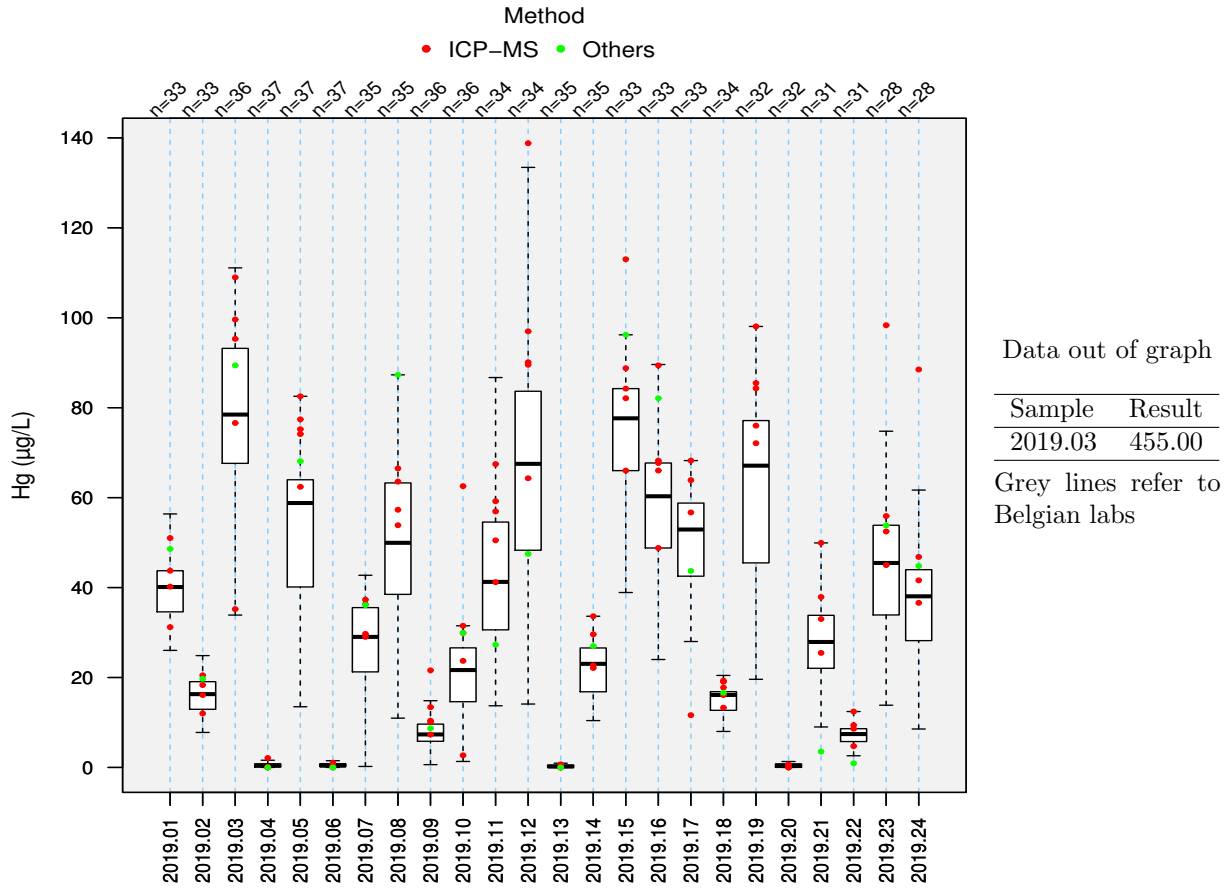
Grey lines refer to Belgian labs

1.3.8 Hg

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	40.05	7.75	28	4	4	0	0
2019.01	Others	43.75	6.5	4	1	0	0	1
2019.01	Global	40.12	6.78	33	5	5	0	0
2019.02	ICP-MS	15.88	4.91	28	4	4	0	0
2019.02	Others	20.01	1.42	4	1	0	0	1
2019.02	Global	16.3	4.55	33	5	5	0	0
2019.03	ICP-MS	76.6	21.71	31	5	5	0	0
2019.03	Others	79.97	3.08	4	1	0	0	1
2019.03	Global	78.47	18.16	36	6	6	0	0
2019.04	ICP-MS	0.4	0.52	32	5	4	1	0
2019.04	Others	0.76	1.25	4	1	0	0	1
2019.04	Global	0.4	0.53	37	6	5	1	0
2019.05	ICP-MS	56.17	20.53	33	5	5	0	0
2019.05	Others	60.29	4.23	3	1	0	0	1
2019.05	Global	58.8	17.67	37	6	6	0	0
2019.06	ICP-MS	0.39	0.3	33	5	5	0	0
2019.06	Others	0.77	0.45	3	1	0	0	1
2019.06	Global	0.4	0.47	37	6	6	0	0
2019.07	ICP-MS	29.03	11.26	31	4	4	0	0
2019.07	Others	31.12	6.46	4	1	0	0	1
2019.07	Global	29.03	10.59	35	5	5	0	0
2019.08	ICP-MS	49.95	18.56	31	4	4	0	0
2019.08	Others	56.45	23.31	4	1	0	0	1
2019.08	Global	49.95	18.37	35	5	5	0	0
2019.09	ICP-MS	7.34	3.3	32	5	4	1	0
2019.09	Others	7.68	1.65	4	1	0	0	1
2019.09	Global	7.34	2.65	36	6	5	1	0
2019.10	ICP-MS	21.66	8.18	32	5	4	1	0
2019.10	Others	24.88	6.36	4	1	0	0	1
2019.10	Global	21.66	8.6	36	6	5	1	0
2019.11	ICP-MS	41.26	17.63	30	5	5	0	0
2019.11	Others	41.64	8.54	4	1	0	0	1
2019.11	Global	41.26	17.63	34	6	6	0	0
2019.12	ICP-MS	67.51	29.36	30	5	5	0	0
2019.12	Others	62.91	13.54	4	1	0	0	1
2019.12	Global	67.51	25.57	34	6	6	0	0
2019.13	ICP-MS	0.2	0.35	30	4	4	0	0
2019.13	Others	0.32	0.52	4	1	0	0	1
2019.13	Global	0.2	0.39	35	5	5	0	0
2019.14	ICP-MS	22.41	7.34	30	4	4	0	0
2019.14	Others	25.02	3.52	4	1	0	0	1
2019.14	Global	23.04	7.22	35	5	5	0	0
2019.15	ICP-MS	78.13	14.08	30	5	5	0	0
2019.15	Others	71.66	9.62	3	1	0	0	1
2019.15	Global	77.63	13.52	33	6	6	0	0
2019.16	ICP-MS	60.74	14.64	30	5	5	0	0
2019.16	Others	60.29	8.76	3	1	0	0	1
2019.16	Global	60.3	14.01	33	6	6	0	0
2019.17	ICP-MS	53.83	12.45	30	4	3	1	0
2019.17	Others	47.13	1.85	3	1	0	0	1
2019.17	Global	52.91	12.05	33	5	4	1	0
2019.18	ICP-MS	16.1	3.42	31	5	5	0	0
2019.18	Others	16.16	1.06	3	1	0	0	1
2019.18	Global	16.12	2.92	34	6	6	0	0
2019.19	ICP-MS	69.87	17.43	30	5	5	0	0
2019.20	ICP-MS	0.3	0.49	30	5	5	0	0
2019.21	ICP-MS	30.43	8.46	28	4	4	0	0
2019.21	Others	10.25	3.07	3	1	0	0	1
2019.21	Global	27.9	8.73	31	5	5	0	0
2019.22	ICP-MS	7.92	1.93	28	4	4	0	0
2019.22	Others	0.92	1.75	3	1	0	0	1

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.22	Global	7.42	2.12	31	5	4	1	0
2019.23	ICP-MS	45	14.3	27	4	3	1	0
2019.23	Others	53.8	0	1	1	0	0	1
2019.23	Global	45.47	13.88	28	5	4	1	0
2019.24	ICP-MS	38	10.93	27	4	3	1	0
2019.24	Others	44.8	0	1	1	0	0	1
2019.24	Global	38.05	11.24	28	5	4	1	0

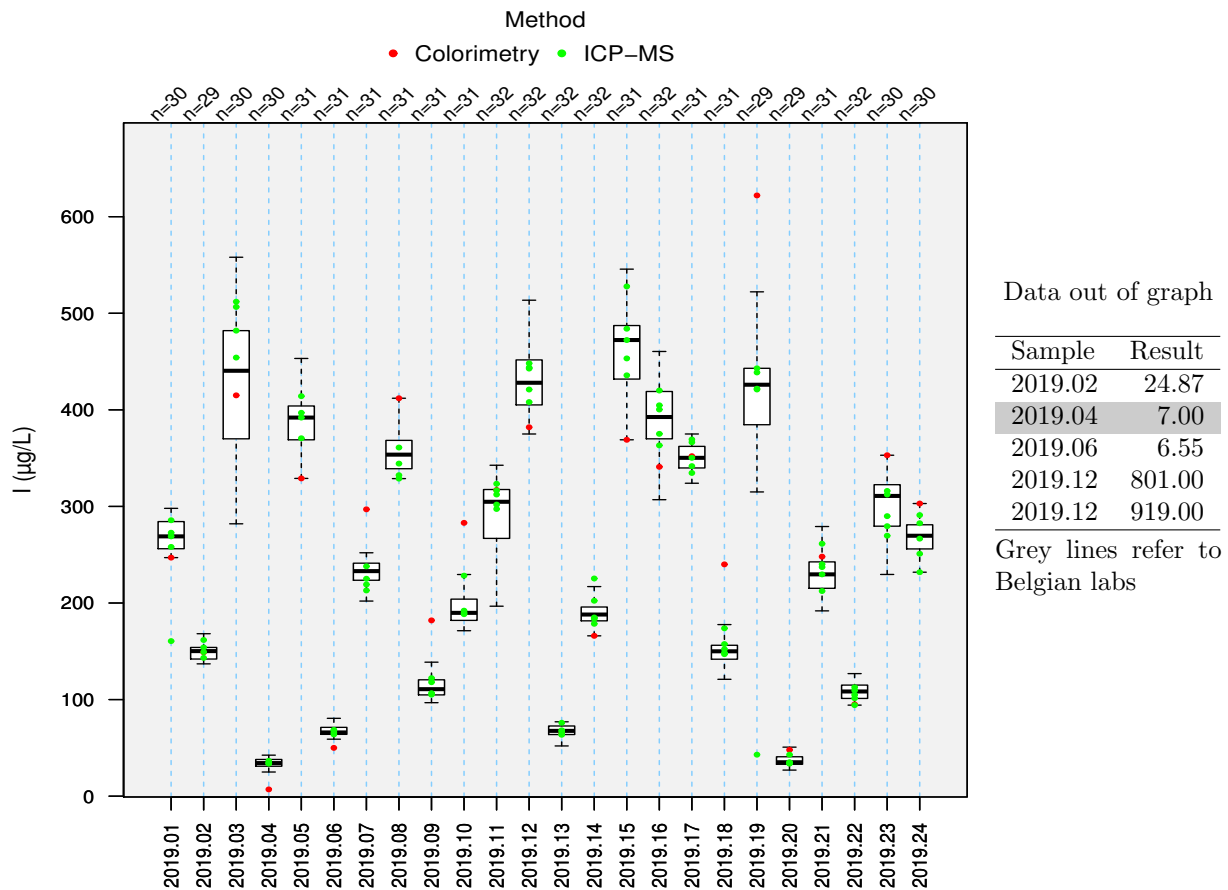


1.3.9 I

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	Colorimetry	268.5	15.94	2	1	0	0	1
2019.01	ICP-MS	269	19.1	28	5	4	1	0
2019.01	Global	269	20.25	30	6	5	1	0
2019.02	Colorimetry	155.5	4.82	2	1	0	0	1
2019.02	ICP-MS	150.2	9.84	27	4	4	0	0
2019.02	Global	150.2	8.9	29	5	5	0	0
2019.03	Colorimetry	392.5	16.68	2	1	0	0	1
2019.03	ICP-MS	454.56	80.66	28	4	4	0	0
2019.03	Global	440.46	80.53	30	5	5	0	0
2019.04	Colorimetry	22.5	11.49	2	1	0	0	1
2019.04	ICP-MS	34.27	5.31	28	4	4	0	0
2019.04	Global	34.27	5.18	30	5	4	1	0
2019.05	Colorimetry	360	22.98	2	1	0	0	1
2019.05	ICP-MS	393.8	26.27	29	4	4	0	0
2019.05	Global	392	25.96	31	5	5	0	0
2019.06	Colorimetry	57	5.19	2	1	0	0	1
2019.06	ICP-MS	66.24	6.52	29	4	4	0	0
2019.06	Global	65.99	5.37	31	5	5	0	0
2019.07	Colorimetry	249.5	35.21	2	1	0	0	1
2019.07	ICP-MS	233	11.85	29	4	4	0	0
2019.07	Global	233	13.1	31	5	4	1	0
2019.08	Colorimetry	376.5	26.32	2	1	0	0	1
2019.08	ICP-MS	353.61	22.16	29	4	4	0	0
2019.08	Global	353.61	21.75	31	5	5	0	0
2019.09	Colorimetry	139.5	31.51	2	1	0	0	1
2019.09	ICP-MS	110.78	10.38	29	4	4	0	0
2019.09	Global	110.78	11.6	31	5	4	1	0
2019.10	Colorimetry	233.5	36.69	2	1	0	0	1
2019.10	ICP-MS	189.8	17.79	29	4	4	0	0
2019.10	Global	189.8	16.31	31	5	4	1	0
2019.11	Colorimetry	200	86.73	2	1	0	0	1
2019.11	ICP-MS	304.81	34.6	30	5	5	0	0
2019.11	Global	304.81	36.8	32	6	6	0	0
2019.12	Colorimetry	394.5	9.27	2	1	0	0	1
2019.12	ICP-MS	432.07	31.71	30	5	5	0	0
2019.12	Global	428.03	33.21	32	6	6	0	0
2019.13	Colorimetry	58.5	4.82	2	1	0	0	1
2019.13	ICP-MS	68.23	6.48	30	5	5	0	0
2019.13	Global	67.6	6.37	32	6	6	0	0
2019.14	Colorimetry	169	2.22	2	1	0	0	1
2019.14	ICP-MS	189.42	9.73	30	5	4	1	0
2019.14	Global	188.06	10.12	32	6	5	1	0
2019.15	Colorimetry	391	16.31	2	1	0	0	1
2019.15	ICP-MS	474.61	36.58	29	5	5	0	0
2019.15	Global	472.27	41.08	31	6	6	0	0
2019.16	Colorimetry	344.5	2.59	2	1	0	0	1
2019.16	ICP-MS	398.54	32.78	30	5	5	0	0
2019.16	Global	392.57	35.95	32	6	6	0	0
2019.17	Colorimetry	338	10.38	2	1	0	0	1
2019.17	ICP-MS	350.32	16.75	29	5	5	0	0
2019.17	Global	350.32	16.56	31	6	6	0	0
2019.18	Colorimetry	180.5	44.11	2	1	0	0	1
2019.18	ICP-MS	150	9.64	29	5	5	0	0
2019.18	Global	150	10.69	31	6	5	1	0
2019.19	Colorimetry	524	72.65	2	1	0	0	1
2019.19	ICP-MS	421.86	47.75	27	5	4	1	0
2019.19	Global	426	43.29	29	6	4	2	0
2019.20	Colorimetry	39.5	6.3	2	1	0	0	1
2019.20	ICP-MS	35.12	5.45	27	5	5	0	0
2019.20	Global	35.12	5.78	29	6	6	0	0
2019.21	Colorimetry	230.5	12.97	2	1	0	0	1

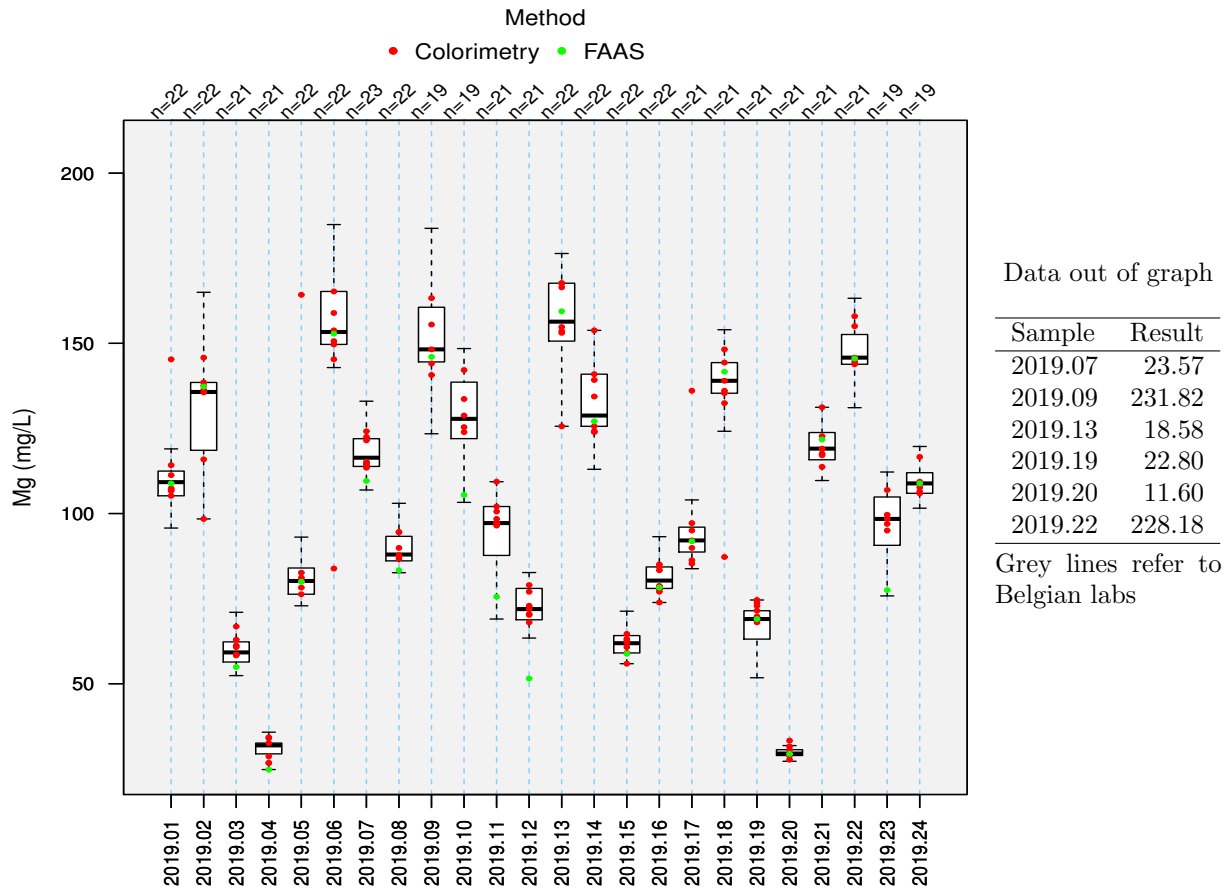
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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.21	ICP-MS	229.65	17.91	29	5	5	0	0
2019.21	Global	229.65	20.27	31	6	6	0	0
2019.22	Colorimetry	101	4.45	2	1	0	0	1
2019.22	ICP-MS	109.19	10.02	30	5	5	0	0
2019.22	Global	108.39	10.17	32	6	6	0	0
2019.23	Colorimetry	254.5	73.02	2	1	0	0	1
2019.23	ICP-MS	310.87	24.69	28	5	5	0	0
2019.23	Global	310.87	29.46	30	6	6	0	0
2019.24	Colorimetry	273.5	21.87	2	1	0	0	1
2019.24	ICP-MS	269.64	15.89	28	5	5	0	0
2019.24	Global	269.64	17.65	30	6	6	0	0



1.3.10 Mg

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	Colorimetry	107.41	4.41	7	7	6	1	0
2019.01	FAAS	110.32	1.77	6	1	1	0	0
2019.02	Colorimetry	136.32	9.1	7	7	6	1	0
2019.02	FAAS	136.94	14.68	6	1	1	0	0
2019.03	Colorimetry	61	2.53	6	6	6	0	0
2019.03	FAAS	59.54	4.1	6	1	1	0	0
2019.04	Colorimetry	30.62	4.77	6	6	6	0	0
2019.04	FAAS	32.09	1.63	6	1	0	1	0
2019.05	Colorimetry	80.19	1.98	7	7	6	1	0
2019.05	FAAS	81.97	4.4	6	1	1	0	0
2019.06	Colorimetry	150.66	6.58	7	7	6	1	0
2019.06	FAAS	161.71	13.71	6	1	1	0	0
2019.07	Colorimetry	115.18	5.58	7	7	7	0	0
2019.07	FAAS	117.73	8.35	6	1	1	0	0
2019.08	Colorimetry	87.72	3.42	7	7	7	0	0
2019.08	FAAS	88.82	7.02	6	1	1	0	0
2019.09	Colorimetry	148.23	8.47	5	5	0	0	5
2019.09	FAAS	147.72	9	6	1	1	0	0
2019.09	Global	148.23	11.91	19	6	6	0	0
2019.10	Colorimetry	128.79	6.12	5	5	0	0	5
2019.10	FAAS	122.02	1.02	6	1	0	1	0
2019.10	Global	127.82	12.29	19	6	6	0	0
2019.11	Colorimetry	98.42	3.06	7	7	6	1	0
2019.11	FAAS	100.72	16.54	6	1	1	0	0
2019.12	Colorimetry	71.93	3.42	7	7	7	0	0
2019.12	FAAS	71.2	5.3	6	1	0	1	0
2019.13	Colorimetry	154.79	10.18	7	7	7	0	0
2019.13	FAAS	155.94	13.17	6	1	1	0	0
2019.14	Colorimetry	134.38	11.26	7	7	7	0	0
2019.14	FAAS	126.72	8.91	6	1	1	0	0
2019.15	Colorimetry	62.21	2.25	7	7	7	0	0
2019.15	FAAS	62.75	3.4	6	1	1	0	0
2019.16	Colorimetry	78.73	4.77	7	7	7	0	0
2019.16	FAAS	79.83	4.34	6	1	1	0	0
2019.17	Colorimetry	92.1	5.94	7	7	6	1	0
2019.17	FAAS	94.29	7.39	6	1	1	0	0
2019.18	Colorimetry	136.08	5.76	7	7	6	1	0
2019.18	FAAS	148.93	13.74	6	1	1	0	0
2019.19	Colorimetry	71.44	2.97	7	7	7	0	0
2019.19	FAAS	68.53	1.93	5	1	0	0	1
2019.19	Global	69.01	6.18	21	8	8	0	0
2019.20	Colorimetry	29.16	1.53	7	7	7	0	0
2019.20	FAAS	29.4	0.36	5	1	0	0	1
2019.20	Global	29.5	1.26	21	8	7	1	0
2019.21	Colorimetry	118.34	3.38	6	6	5	1	0
2019.21	FAAS	117.85	3.75	6	1	1	0	0
2019.22	Colorimetry	145.68	5.85	6	6	6	0	0
2019.22	FAAS	144.47	6.32	6	1	1	0	0
2019.23	Colorimetry	98.42	1.98	5	5	0	0	5
2019.23	FAAS	94.56	11.91	6	1	1	0	0
2019.23	Global	98.42	10.53	19	6	6	0	0
2019.24	Colorimetry	107.65	2.16	5	5	0	0	5
2019.24	FAAS	106.67	6.48	6	1	1	0	0
2019.24	Global	108.86	4.48	19	6	6	0	0

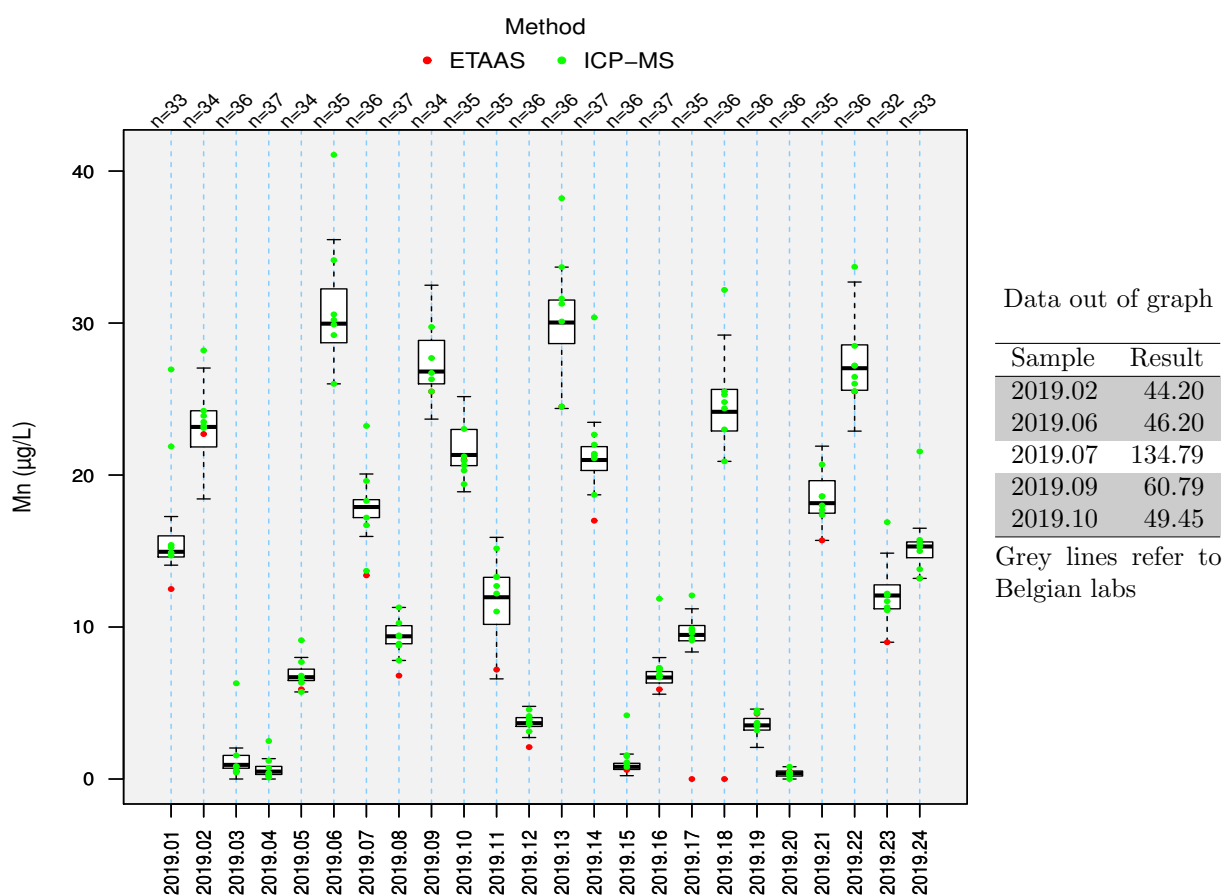


1.3.11 Mn

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	12.5	0	1	1	0	0	1
2019.01	ICP-MS	14.97	1	32	6	4	2	0
2019.01	Global	14.95	1.03	33	7	5	2	0
2019.02	ETAAS	22.7	0	1	1	0	0	1
2019.02	ICP-MS	23.23	1.76	33	7	6	1	0
2019.02	Global	23.16	1.68	34	8	7	1	0
2019.03	ETAAS	0.5	0	1	1	0	0	1
2019.03	ICP-MS	0.93	0.57	34	6	5	1	0
2019.03	Global	0.93	0.62	36	7	6	1	0
2019.04	ETAAS	0.2	0	1	1	0	0	1
2019.04	ICP-MS	0.49	0.38	35	7	6	1	0
2019.04	Global	0.49	0.39	37	8	7	1	0
2019.05	ETAAS	5.9	0	1	1	0	0	1
2019.05	ICP-MS	6.7	0.47	33	6	5	1	0
2019.05	Global	6.7	0.53	34	7	6	1	0
2019.06	ETAAS	46.2	0	1	1	0	0	1
2019.06	ICP-MS	29.93	2.6	34	7	6	1	0
2019.06	Global	29.96	2.63	35	8	6	2	0
2019.07	ETAAS	13.4	0	1	1	0	0	1
2019.07	ICP-MS	17.99	0.84	35	6	4	2	0
2019.07	Global	17.89	0.85	36	7	4	3	0
2019.08	ETAAS	6.8	0	1	1	0	0	1
2019.08	ICP-MS	9.39	0.87	36	7	7	0	0
2019.08	Global	9.39	0.88	37	8	8	0	0
2019.09	ETAAS	25.5	0	1	1	0	0	1
2019.09	ICP-MS	26.9	2.05	33	6	5	1	0
2019.09	Global	26.81	2.09	34	7	6	1	0
2019.10	ETAAS	21	0	1	1	0	0	1
2019.10	ICP-MS	21.44	1.77	34	7	6	1	0
2019.10	Global	21.32	1.76	35	8	7	1	0
2019.11	ETAAS	7.2	0	1	1	0	0	1
2019.11	ICP-MS	11.96	2.19	33	6	6	0	0
2019.11	Global	11.96	2.29	35	7	7	0	0
2019.12	ETAAS	2.1	0	1	1	0	0	1
2019.12	ICP-MS	3.71	0.43	34	7	7	0	0
2019.12	Global	3.67	0.42	36	8	7	1	0
2019.13	ETAAS	24.5	0	1	1	0	0	1
2019.13	ICP-MS	30.1	2.05	35	6	5	1	0
2019.13	Global	30.04	2.07	36	7	6	1	0
2019.14	ETAAS	17	0	1	1	0	0	1
2019.14	ICP-MS	20.99	1.08	36	7	6	1	0
2019.14	Global	20.99	1.16	37	8	6	2	0
2019.15	ETAAS	0.6	0	1	1	0	0	1
2019.15	ICP-MS	0.81	0.28	35	6	5	1	0
2019.15	Global	0.8	0.27	36	7	6	1	0
2019.16	ETAAS	5.9	0	1	1	0	0	1
2019.16	ICP-MS	6.74	0.55	36	7	6	1	0
2019.16	Global	6.68	0.56	37	8	7	1	0
2019.17	ETAAS	0	0	1	1	0	0	1
2019.17	ICP-MS	9.49	0.75	34	6	5	1	0
2019.17	Global	9.48	0.75	35	7	5	2	0
2019.18	ETAAS	0	0	1	1	0	0	1
2019.18	ICP-MS	24.2	1.99	35	7	6	1	0
2019.18	Global	24.16	1.97	36	8	6	2	0
2019.19	ETAAS	4.3	0	1	1	0	0	1
2019.19	ICP-MS	3.53	0.44	34	6	6	0	0
2019.19	Global	3.53	0.51	36	7	7	0	0
2019.20	ETAAS	0.5	0	1	1	0	0	1
2019.20	ICP-MS	0.37	0.22	34	7	7	0	0
2019.20	Global	0.38	0.23	36	8	8	0	0
2019.21	ETAAS	15.7	0	1	1	0	0	1

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.21	ICP-MS	18.3	1.58	34	6	6	0	0
2019.21	Global	18.15	1.59	35	7	7	0	0
2019.22	ETAAS	25.5	0	1	1	0	0	1
2019.22	ICP-MS	27.11	2.12	35	7	6	1	0
2019.22	Global	27.03	2.18	36	8	7	1	0
2019.23	ETAAS	9	0	1	1	0	0	1
2019.23	ICP-MS	12.1	1.06	31	6	5	1	0
2019.23	Global	12.07	1.12	32	7	6	1	0
2019.24	ETAAS	13.2	0	1	1	0	0	1
2019.24	ICP-MS	15.35	0.66	32	7	5	2	0
2019.24	Global	15.3	0.77	33	8	7	1	0

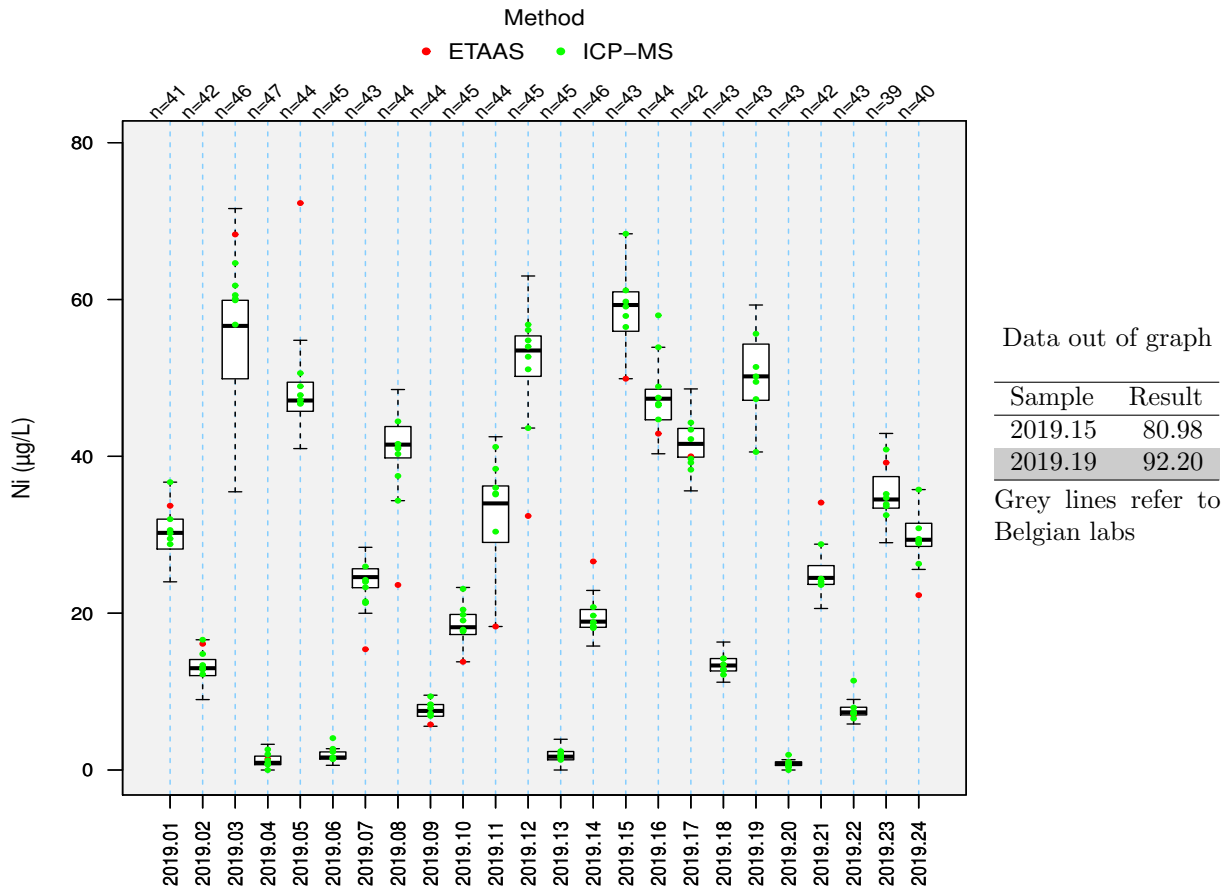


1.3.12 Ni

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	31.82	7.78	3	1	0	0	1
2019.01	ICP-MS	30.22	2.75	38	6	6	0	0
2019.01	Global	30.24	2.82	41	7	7	0	0
2019.02	ETAAS	14.33	3.04	3	1	0	0	1
2019.02	ICP-MS	12.97	1.12	39	7	6	1	0
2019.02	Global	12.98	1.43	42	8	8	0	0
2019.03	ETAAS	52.9	10.67	4	1	0	0	1
2019.03	ICP-MS	56.47	6.05	41	6	6	0	0
2019.03	Global	56.63	7.08	46	7	7	0	0
2019.04	ETAAS	1.2	0.56	4	1	0	0	1
2019.04	ICP-MS	0.9	0.78	42	7	7	0	0
2019.04	Global	0.92	0.81	47	8	8	0	0
2019.05	ETAAS	52.85	5.65	4	1	0	0	1
2019.05	ICP-MS	46.8	2.44	40	6	6	0	0
2019.05	Global	47.12	2.68	44	7	6	1	0
2019.06	ETAAS	2.36	1.64	4	1	0	0	1
2019.06	ICP-MS	1.6	0.64	41	7	6	1	0
2019.06	Global	1.6	0.67	45	8	7	1	0
2019.07	ETAAS	23.66	4.82	3	1	0	0	1
2019.07	ICP-MS	24.66	1.72	39	6	6	0	0
2019.07	Global	24.6	1.79	43	7	6	1	0
2019.08	ETAAS	42.68	7.19	3	1	0	0	1
2019.08	ICP-MS	41.5	2.44	40	7	7	0	0
2019.08	Global	41.5	2.71	44	8	7	1	0
2019.09	ETAAS	6.69	2.78	4	1	0	0	1
2019.09	ICP-MS	7.56	1.07	40	6	6	0	0
2019.09	Global	7.54	1.09	44	7	7	0	0
2019.10	ETAAS	15.6	1.56	4	1	0	0	1
2019.10	ICP-MS	18.5	1.87	41	7	7	0	0
2019.10	Global	18.21	1.9	45	8	8	0	0
2019.11	ETAAS	28.95	2	5	1	0	0	1
2019.11	ICP-MS	34.89	4.67	38	6	6	0	0
2019.11	Global	34	5.24	44	7	7	0	0
2019.12	ETAAS	41.22	15.39	5	1	0	0	1
2019.12	ICP-MS	53.5	3.12	39	7	6	1	0
2019.12	Global	53.5	3.83	45	8	7	1	0
2019.13	ETAAS	3.47	3	4	1	0	0	1
2019.13	ICP-MS	1.7	0.78	41	6	6	0	0
2019.13	Global	1.7	0.79	45	7	7	0	0
2019.14	ETAAS	24.5	1.49	4	1	0	0	1
2019.14	ICP-MS	18.91	1.2	42	7	7	0	0
2019.14	Global	18.92	1.55	46	8	7	1	0
2019.15	ETAAS	49.9	6.14	3	1	0	0	1
2019.15	ICP-MS	59.3	3.51	39	6	6	0	0
2019.15	Global	59.3	3.73	43	7	7	0	0
2019.16	ETAAS	42.9	3.63	3	1	0	0	1
2019.16	ICP-MS	47.53	1.88	40	7	5	2	0
2019.16	Global	47.35	2.86	44	8	7	1	0
2019.17	ETAAS	40	0.73	3	1	0	0	1
2019.17	ICP-MS	41.68	2.75	39	6	6	0	0
2019.17	Global	41.59	2.68	42	7	7	0	0
2019.18	ETAAS	13.4	1.36	3	1	0	0	1
2019.18	ICP-MS	13.06	1.21	40	7	7	0	0
2019.18	Global	13.33	1.17	43	8	8	0	0
2019.19	ETAAS	52.9	16.63	3	1	0	0	1
2019.19	ICP-MS	50.2	5.31	39	6	6	0	0
2019.19	Global	50.2	5.31	43	7	6	1	0
2019.20	ETAAS	1	0.32	3	1	0	0	1
2019.20	ICP-MS	0.76	0.34	39	7	6	1	0
2019.20	Global	0.8	0.34	43	8	7	1	0
2019.21	ETAAS	25.07	3.78	3	1	0	0	1

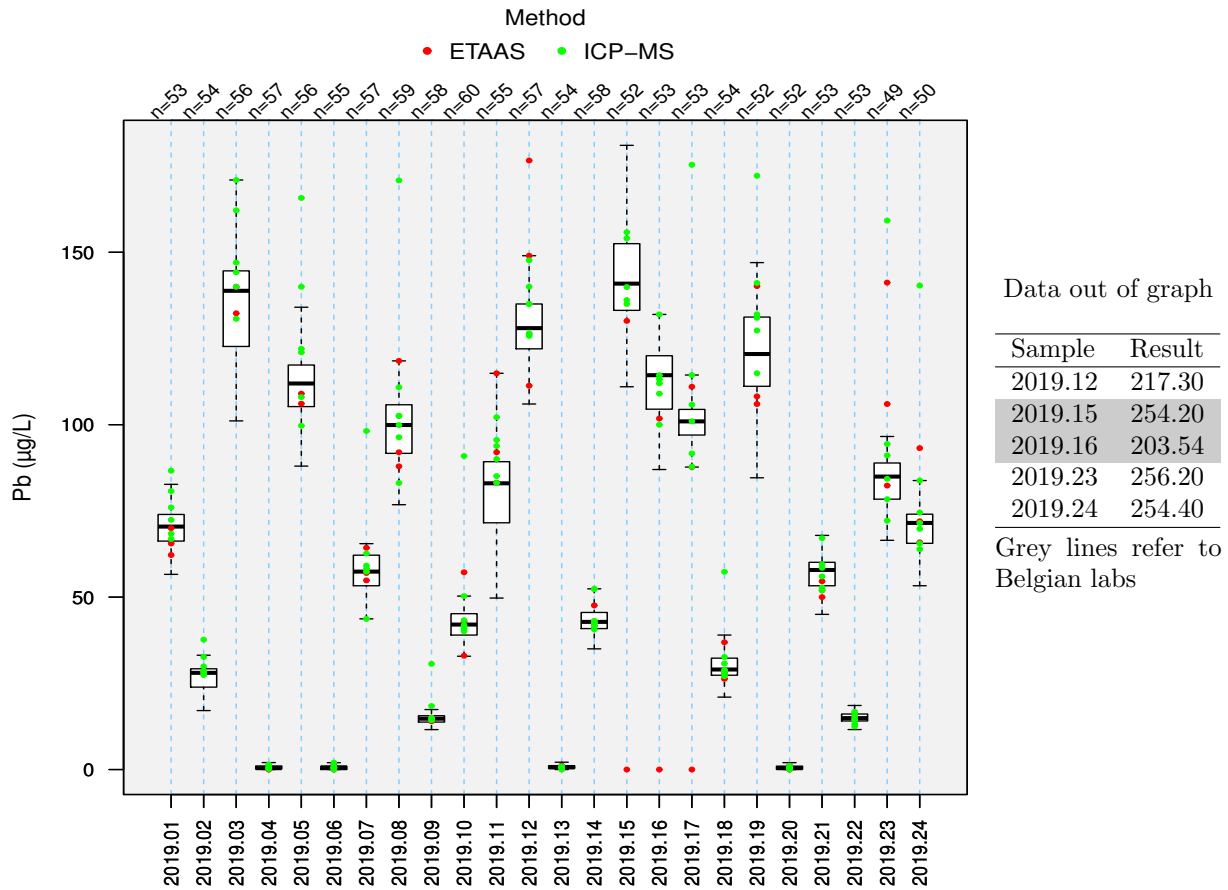
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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.21	ICP-MS	24.4	1.48	39	6	6	0	0
2019.21	Global	24.5	1.61	42	7	6	1	0
2019.22	ETAAS	7	0.3	3	1	0	0	1
2019.22	ICP-MS	7.37	0.74	40	7	6	1	0
2019.22	Global	7.35	0.73	43	8	7	1	0
2019.23	ETAAS	37.16	1.52	2	1	0	0	1
2019.23	ICP-MS	34.44	2.95	36	6	6	0	0
2019.23	Global	34.5	2.98	39	7	7	0	0
2019.24	ETAAS	25.8	2.59	2	1	0	0	1
2019.24	ICP-MS	29.47	2.13	37	7	7	0	0
2019.24	Global	29.37	2.09	40	8	6	2	0



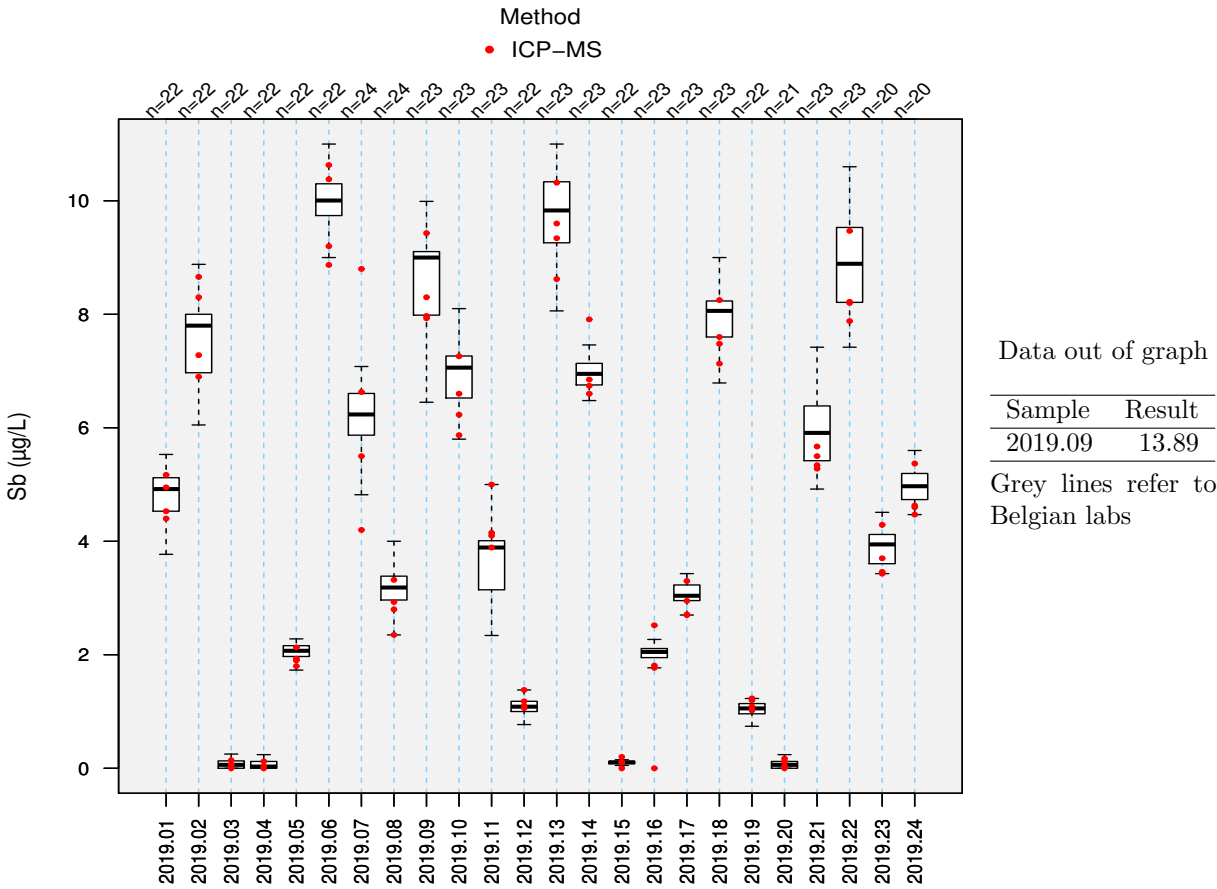
1.3.13 Pb

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	65.94	7.43	10	3	3	0	0
2019.01	ICP-MS	71.65	5.53	42	6	6	0	0
2019.02	ETAAS	25.95	5.48	10	3	3	0	0
2019.02	ICP-MS	28.4	2.08	43	7	6	1	0
2019.03	ETAAS	137.41	17.22	10	2	2	0	0
2019.03	ICP-MS	139.3	15	45	6	6	0	0
2019.04	ETAAS	1.22	1.38	10	2	2	0	0
2019.04	ICP-MS	0.4	0.59	46	7	7	0	0
2019.05	ETAAS	110	20.61	10	2	2	0	0
2019.05	ICP-MS	112	7.56	45	6	4	2	0
2019.06	ETAAS	1.08	2.3	10	2	2	0	0
2019.06	ICP-MS	0.59	0.63	44	7	7	0	0
2019.07	ETAAS	57.1	7.98	12	3	3	0	0
2019.07	ICP-MS	58.02	5.44	43	6	5	1	0
2019.08	ETAAS	98.5	19.34	12	3	3	0	0
2019.08	ICP-MS	99.9	10.59	45	7	6	1	0
2019.09	ETAAS	14	4.41	11	3	3	0	0
2019.09	ICP-MS	14.81	1.13	46	6	4	2	0
2019.10	ETAAS	39	6.04	12	3	2	1	0
2019.10	ICP-MS	42.71	3.89	47	7	6	1	0
2019.11	ETAAS	86.14	15.87	12	3	3	0	0
2019.11	ICP-MS	81.08	12.87	42	6	6	0	0
2019.12	ETAAS	128.23	24.14	12	3	3	0	0
2019.12	ICP-MS	128.15	9.11	44	7	7	0	0
2019.13	ETAAS	1.35	2.15	9	2	2	0	0
2019.13	ICP-MS	0.5	0.41	44	6	6	0	0
2019.14	ETAAS	41.6	6.55	11	3	3	0	0
2019.14	ICP-MS	43.2	3.04	46	7	6	1	0
2019.15	ETAAS	138.82	17.72	9	2	1	1	0
2019.15	ICP-MS	140.9	11.78	41	6	5	1	0
2019.16	ETAAS	111.89	13.49	9	2	1	1	0
2019.16	ICP-MS	114.61	8.4	42	7	6	1	0
2019.17	ETAAS	103.6	17.26	9	3	2	1	0
2019.17	ICP-MS	100.14	5.09	43	6	5	1	0
2019.18	ETAAS	28	7.85	9	3	3	0	0
2019.18	ICP-MS	29.01	2.51	44	7	6	1	0
2019.19	ETAAS	120	13.57	9	3	3	0	0
2019.19	ICP-MS	124.21	14.32	42	6	5	1	0
2019.20	ETAAS	0.8	1	9	3	3	0	0
2019.20	ICP-MS	0.38	0.35	42	7	7	0	0
2019.21	ETAAS	54.6	6.01	9	3	3	0	0
2019.21	ICP-MS	57.87	4.53	43	6	6	0	0
2019.22	ETAAS	15.55	2.84	8	3	3	0	0
2019.22	ICP-MS	14.71	1.09	44	7	7	0	0
2019.23	ETAAS	85.97	15.97	10	3	2	1	0
2019.23	ICP-MS	84.11	8.88	38	6	5	1	0
2019.24	ETAAS	71.75	8.41	10	3	3	0	0
2019.24	ICP-MS	70.7	5.7	39	7	6	1	0



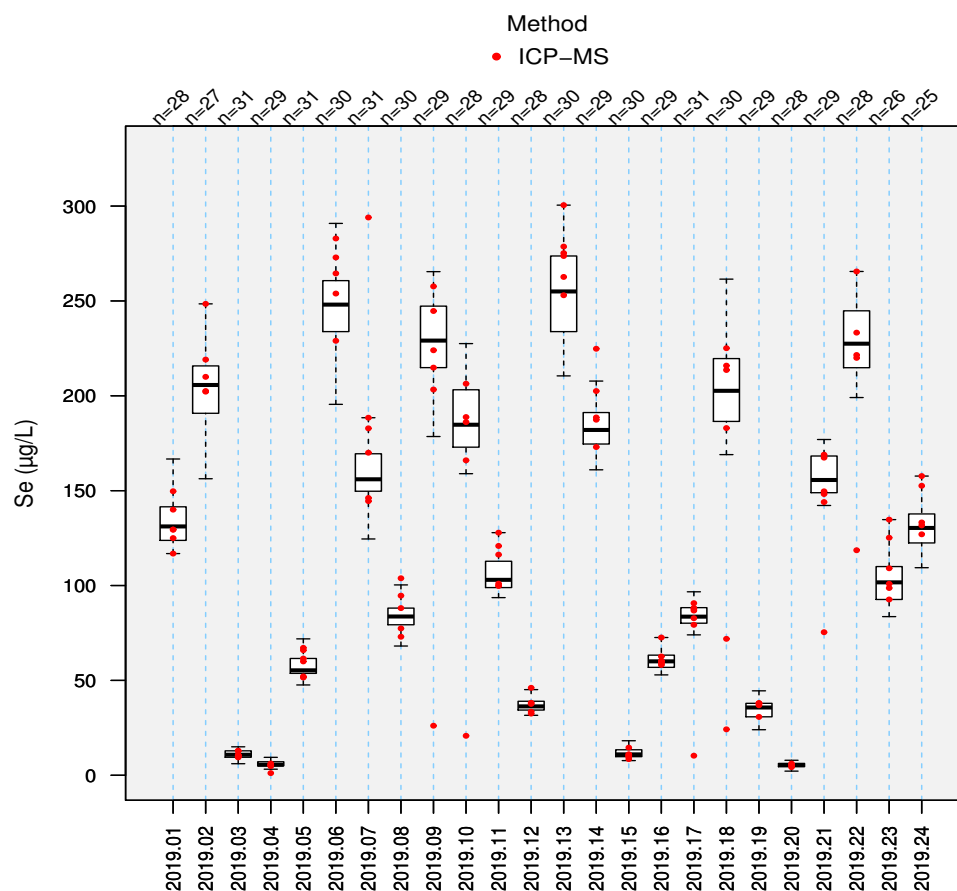
1.3.14 Sb

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	4.92	0.37	22	4	4	0	0
2019.02	ICP-MS	7.8	0.75	22	4	4	0	0
2019.03	ICP-MS	0.06	0.09	22	4	4	0	0
2019.04	ICP-MS	0.03	0.08	22	4	4	0	0
2019.05	ICP-MS	2.07	0.14	22	4	4	0	0
2019.06	ICP-MS	10	0.38	22	4	4	0	0
2019.07	ICP-MS	6.23	0.5	24	4	2	2	0
2019.08	ICP-MS	3.19	0.29	24	4	4	0	0
2019.09	ICP-MS	9	0.83	23	4	4	0	0
2019.10	ICP-MS	7.06	0.55	23	4	4	0	0
2019.11	ICP-MS	3.89	0.64	23	4	4	0	0
2019.12	ICP-MS	1.08	0.12	22	4	4	0	0
2019.13	ICP-MS	9.83	0.8	23	4	4	0	0
2019.14	ICP-MS	6.95	0.28	23	4	3	1	0
2019.15	ICP-MS	0.11	0.03	22	4	3	1	0
2019.16	ICP-MS	2.05	0.12	23	4	2	2	0
2019.17	ICP-MS	3.04	0.2	23	4	4	0	0
2019.18	ICP-MS	8.06	0.47	23	4	4	0	0
2019.19	ICP-MS	1.06	0.12	22	4	4	0	0
2019.20	ICP-MS	0.06	0.09	21	4	4	0	0
2019.21	ICP-MS	5.91	0.72	23	4	4	0	0
2019.22	ICP-MS	8.89	0.98	23	4	4	0	0
2019.23	ICP-MS	3.95	0.34	20	4	4	0	0
2019.24	ICP-MS	4.97	0.29	20	4	4	0	0



1.3.15 Se

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	130	13.12	27	6	6	0	0
2019.02	ICP-MS	204.09	19.5	26	5	5	0	0
2019.03	ICP-MS	10.76	2.54	30	7	7	0	0
2019.04	ICP-MS	5.53	1.61	28	6	6	0	0
2019.05	ICP-MS	55.65	5.85	30	6	6	0	0
2019.06	ICP-MS	249.64	19.21	29	5	5	0	0
2019.07	ICP-MS	156.61	14.4	30	6	5	1	0
2019.08	ICP-MS	84.2	6.51	29	5	4	1	0
2019.09	ICP-MS	226.73	25.26	28	6	5	1	0
2019.10	ICP-MS	186.14	22.43	27	5	4	1	0
2019.11	ICP-MS	102.85	10.7	28	6	6	0	0
2019.12	ICP-MS	36.4	3.44	27	5	5	0	0
2019.13	ICP-MS	257	29.55	29	6	6	0	0
2019.14	ICP-MS	183.03	12.83	28	5	4	1	0
2019.15	ICP-MS	11	2.69	29	7	7	0	0
2019.16	ICP-MS	60.1	4.91	28	6	6	0	0
2019.17	ICP-MS	83.19	6.26	30	7	6	1	0
2019.18	ICP-MS	203.03	24.55	29	6	4	2	0
2019.19	ICP-MS	35.61	5.27	28	5	5	0	0
2019.20	ICP-MS	5.29	1.15	27	4	4	0	0
2019.21	ICP-MS	156.81	14.06	28	6	5	1	0
2019.22	ICP-MS	227.5	21.35	27	5	4	1	0
2019.23	ICP-MS	101.12	12.86	25	6	6	0	0
2019.24	ICP-MS	130.18	11.51	24	5	5	0	0



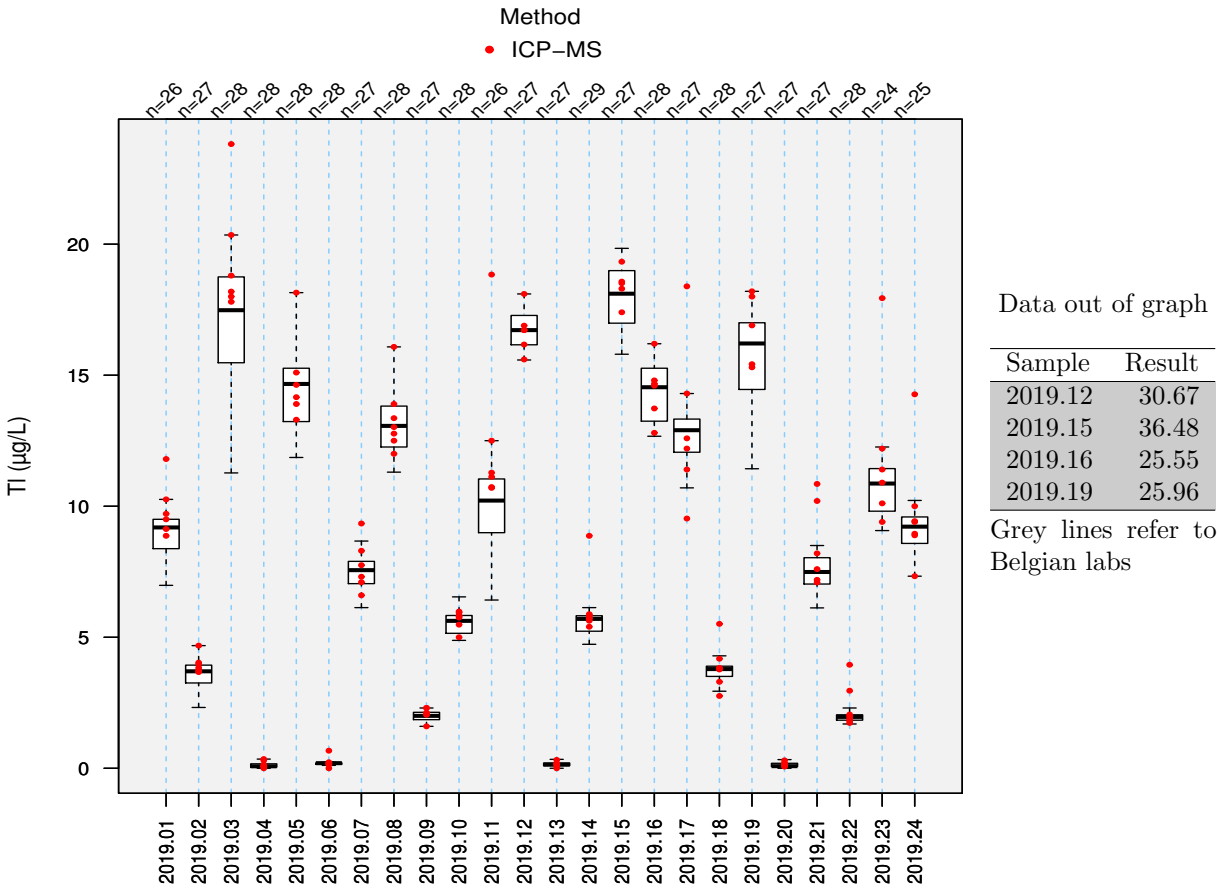
Data out of graph

Sample	Result
2019.05	339.00
2019.06	415.40
2019.16	50876.00
2019.21	335.00
2019.22	482.00

Grey lines refer to
Belgian labs

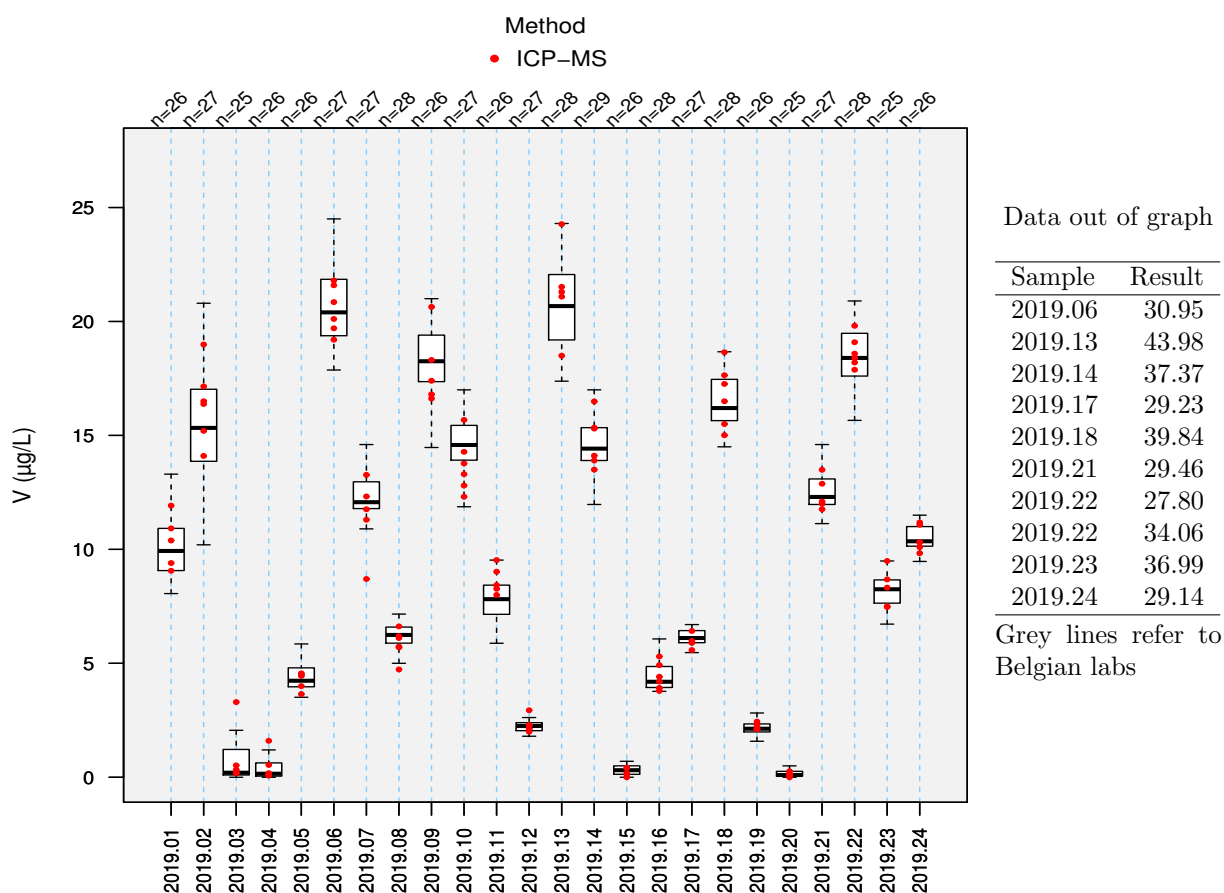
1.3.16 Tl

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	9.19	0.77	26	6	5	1	0
2019.02	ICP-MS	3.7	0.5	27	7	7	0	0
2019.03	ICP-MS	17.48	2.36	28	6	6	0	0
2019.04	ICP-MS	0.08	0.08	28	7	6	1	0
2019.05	ICP-MS	14.66	1.46	28	6	6	0	0
2019.06	ICP-MS	0.2	0.04	28	7	5	2	0
2019.07	ICP-MS	7.56	0.63	27	6	6	0	0
2019.08	ICP-MS	13.06	1.07	28	7	7	0	0
2019.09	ICP-MS	2	0.21	27	6	6	0	0
2019.10	ICP-MS	5.62	0.45	28	7	7	0	0
2019.11	ICP-MS	10.21	1.49	26	6	5	1	0
2019.12	ICP-MS	16.72	0.83	27	7	6	1	0
2019.13	ICP-MS	0.14	0.07	27	6	6	0	0
2019.14	ICP-MS	5.7	0.44	29	7	6	1	0
2019.15	ICP-MS	18.11	1.49	27	6	5	1	0
2019.16	ICP-MS	14.54	1.48	28	7	6	1	0
2019.17	ICP-MS	12.9	0.94	27	6	4	2	0
2019.18	ICP-MS	3.79	0.27	28	7	5	2	0
2019.19	ICP-MS	16.21	1.89	27	6	5	1	0
2019.20	ICP-MS	0.08	0.09	27	7	7	0	0
2019.21	ICP-MS	7.49	0.75	27	6	4	2	0
2019.22	ICP-MS	1.96	0.15	28	7	5	2	0
2019.23	ICP-MS	10.87	1.2	24	6	5	1	0
2019.24	ICP-MS	9.22	0.75	25	7	6	1	0



1.3.17 V

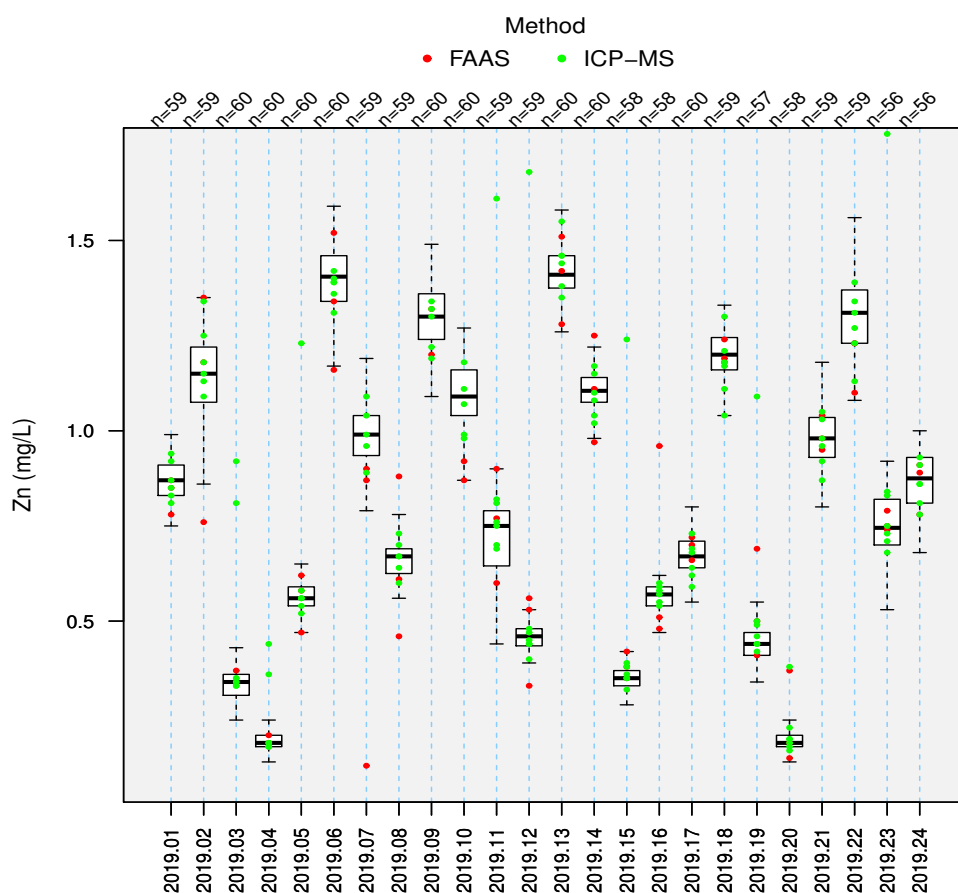
Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	9.93	1.27	26	5	5	0	0
2019.02	ICP-MS	15.33	2.34	27	6	6	0	0
2019.03	ICP-MS	0.2	0.83	25	5	4	1	0
2019.04	ICP-MS	0.16	0.41	26	6	5	1	0
2019.05	ICP-MS	4.24	0.57	26	5	5	0	0
2019.06	ICP-MS	20.4	1.83	27	6	6	0	0
2019.07	ICP-MS	12.07	0.87	27	5	4	1	0
2019.08	ICP-MS	6.24	0.5	28	6	5	1	0
2019.09	ICP-MS	18.25	1.45	26	5	5	0	0
2019.10	ICP-MS	14.58	1.13	27	6	6	0	0
2019.11	ICP-MS	7.81	0.89	26	5	5	0	0
2019.12	ICP-MS	2.25	0.26	27	6	6	0	0
2019.13	ICP-MS	20.67	1.76	28	5	5	0	0
2019.14	ICP-MS	14.42	1.07	29	6	6	0	0
2019.15	ICP-MS	0.31	0.26	26	5	5	0	0
2019.16	ICP-MS	4.19	0.65	28	6	6	0	0
2019.17	ICP-MS	6.11	0.39	27	5	5	0	0
2019.18	ICP-MS	16.2	1.26	28	6	6	0	0
2019.19	ICP-MS	2.13	0.25	26	5	5	0	0
2019.20	ICP-MS	0.1	0.16	25	6	6	0	0
2019.21	ICP-MS	12.3	0.83	27	5	5	0	0
2019.22	ICP-MS	18.4	1.24	28	6	6	0	0
2019.23	ICP-MS	8.25	0.76	25	5	5	0	0
2019.24	ICP-MS	10.36	0.59	26	6	6	0	0



1.3.18 Zn

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	FAAS	0.9	0.05	14	3	3	0	0
2019.01	ICP-MS	0.85	0.06	42	7	6	1	0
2019.02	FAAS	1.14	0.29	14	3	3	0	0
2019.02	ICP-MS	1.15	0.1	42	7	6	1	0
2019.03	FAAS	0.34	0.07	13	2	2	0	0
2019.03	ICP-MS	0.34	0.03	44	7	5	2	0
2019.04	FAAS	0.18	0.02	13	2	2	0	0
2019.04	ICP-MS	0.18	0.02	44	7	5	2	0
2019.05	FAAS	0.58	0.04	12	3	3	0	0
2019.05	ICP-MS	0.56	0.03	45	7	6	1	0
2019.06	FAAS	1.44	0.1	12	3	3	0	0
2019.06	ICP-MS	1.4	0.08	45	7	6	1	0
2019.07	FAAS	0.98	0.07	13	3	2	1	0
2019.07	ICP-MS	0.99	0.1	43	7	5	2	0
2019.08	FAAS	0.67	0.06	13	3	1	2	0
2019.08	ICP-MS	0.67	0.04	43	7	6	1	0
2019.09	FAAS	1.31	0.09	12	2	2	0	0
2019.09	ICP-MS	1.3	0.09	45	7	5	2	0
2019.10	FAAS	1.06	0.09	12	2	2	0	0
2019.10	ICP-MS	1.1	0.09	45	7	5	2	0
2019.11	FAAS	0.77	0.15	13	3	3	0	0
2019.11	ICP-MS	0.75	0.09	43	7	6	1	0
2019.12	FAAS	0.47	0.05	13	3	3	0	0
2019.12	ICP-MS	0.46	0.02	43	7	6	1	0
2019.13	FAAS	1.43	0.04	13	3	2	1	0
2019.13	ICP-MS	1.41	0.07	44	7	6	1	0
2019.14	FAAS	1.11	0.04	13	3	1	2	0
2019.14	ICP-MS	1.1	0.07	44	7	6	1	0
2019.15	FAAS	0.36	0.01	14	3	2	1	0
2019.15	ICP-MS	0.35	0.03	41	7	6	1	0
2019.16	FAAS	0.57	0.06	14	3	2	1	0
2019.16	ICP-MS	0.57	0.03	41	7	6	1	0
2019.17	FAAS	0.72	0.04	13	3	3	0	0
2019.17	ICP-MS	0.67	0.04	44	7	6	1	0
2019.18	FAAS	1.23	0.05	12	3	3	0	0
2019.18	ICP-MS	1.19	0.07	44	7	6	1	0
2019.19	FAAS	0.45	0.07	12	3	2	1	0
2019.19	ICP-MS	0.44	0.04	42	7	6	1	0
2019.20	FAAS	0.18	0.02	13	3	2	1	0
2019.20	ICP-MS	0.18	0.03	42	7	6	1	0
2019.21	FAAS	0.98	0.06	14	3	3	0	0
2019.21	ICP-MS	0.98	0.07	42	7	6	1	0
2019.22	FAAS	1.27	0.07	14	3	3	0	0
2019.22	ICP-MS	1.31	0.11	42	7	6	1	0
2019.23	FAAS	0.76	0.09	14	3	3	0	0
2019.23	ICP-MS	0.74	0.08	39	7	6	1	0
2019.24	FAAS	0.9	0.05	14	3	3	0	0
2019.24	ICP-MS	0.86	0.09	39	7	6	1	0

Data out of graph



Grey lines refer to
Belgian labs

Sample	Result
2019.01	2.33
2019.02	3.50
2019.03	366.88
2019.04	0.08
2019.04	0.00
2019.04	187.54
2019.06	3.36
2019.07	3.39
2019.07	1.83
2019.08	2.13
2019.09	1352.00
2019.09	1.95
2019.09	5.78
2019.10	1133.21
2019.10	1125.30
2019.10	5.19
2019.11	766.09
2019.12	433.38
2019.13	3.01
2019.14	2.65
2019.15	0.04
2019.15	319.00
2019.16	0.06
2019.16	957.00
2019.16	1.88
2019.16	2.01
2019.17	688.00
2019.17	2.89
2019.18	1296.00
2019.18	4.46
2019.20	0.00
2019.21	866.80
2019.21	1.83
2019.22	1236.00
2019.22	2.69
2019.23	203.00
2019.23	1.78
2019.24	163.00
2019.24	2.15

2 TRACE ELEMENTS IN SERUM

2.1 PARTICIPATION

32 laboratories participated to the EQA for serum matrix.

Parameter	N labs	Recorded results	Expected number of results	percentage
Al	9	194	216	89.81 %
Co	5	119	120	99.17 %
Cr	6	143	144	99.31 %
Cu	27	603	648	93.06 %
Li	9	204	216	94.44 %
Mg	4	90	96	93.75 %
Mo	2	47	48	97.92 %
Se	13	290	312	92.95 %
Tl	2	46	48	95.83 %
V	1	24	24	100 %
Zn	30	673	720	93.47 %
Total		2433	2592	93.87

2.2 GLOBAL RESULTS

STAT	Element	Total number of results	Number of evaluated results	Number of Z citations	% citations
MA	Al	194	194	15	7.73
MA	Co	119	119	2	1.68
MA	Cr	143	143	5	3.5
MA	Cu	603	581	42	7.23
MA+GA	Cu	603	603 (+22)	43 (+1)	7.13
MA	Li	204	177	20	11.3
MA+GA	Li	204	197 (+20)	20	10.15
MA	Mg	90	81	0	0
MA+GA	Mg	90	90 (+9)	0	0
MA	Mo	47	47	2	4.26
MA	Se	290	290	15	5.17
MA	Tl	46	46	9	19.57
MA	V	24	24	0	0
MA	Zn	673	631	19	3.01
MA+GA	Zn	673	673 (+42)	28 (+9)	4.16
Total	MA+GA	2433	2426	139	5.73
	MA	2433	2333	129	5.53

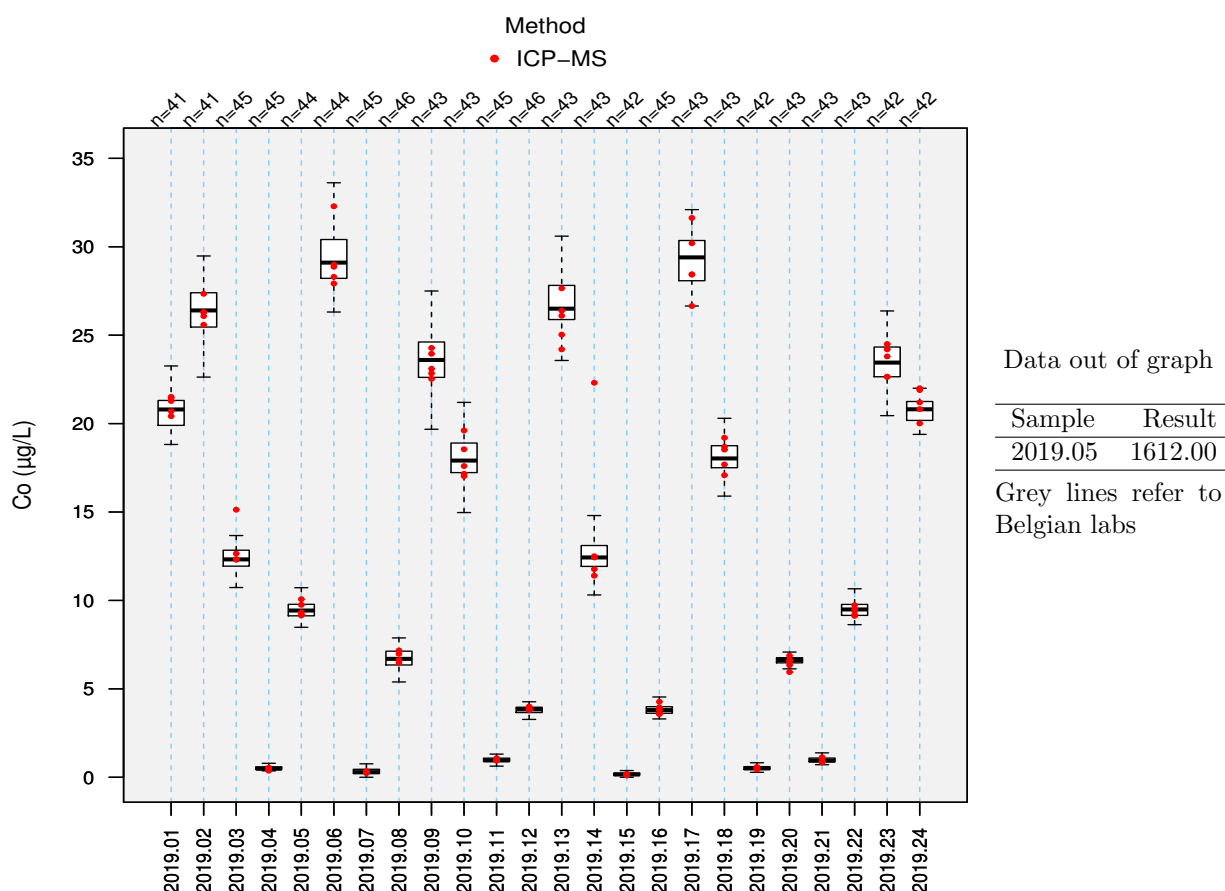
2.3 RESULTS PER ELEMENT

2.3.1 Al

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	28.35	3.8	26	3	2	1	0
2019.01	ICP-MS	28.89	4.51	41	5	4	1	0
2019.02	ETAAS	20.38	3.51	26	3	2	1	0
2019.02	ICP-MS	22	3.97	41	5	5	0	0
2019.03	ETAAS	40.34	6.69	24	3	3	0	0
2019.03	ICP-MS	40.91	6.21	42	6	6	0	0
2019.04	ETAAS	10.27	2.76	24	3	2	1	0
2019.04	ICP-MS	11	3.98	41	6	6	0	0
2019.05	ETAAS	43.92	8.3	24	3	3	0	0
2019.05	ICP-MS	44.95	4.45	40	5	5	0	0
2019.06	ETAAS	16.6	4.16	24	3	3	0	0
2019.06	ICP-MS	18	3.65	39	5	5	0	0
2019.07	ETAAS	7.08	3.7	24	3	3	0	0
2019.07	ICP-MS	6.22	3.83	42	6	5	1	0
2019.08	ETAAS	47.91	7.49	24	3	3	0	0
2019.08	ICP-MS	47.9	5.7	43	6	6	0	0
2019.09	ETAAS	24.57	5.05	25	3	3	0	0
2019.09	ICP-MS	25.11	4.24	41	5	5	0	0
2019.10	ETAAS	28.9	6.66	25	3	3	0	0
2019.10	ICP-MS	32.94	5.13	42	5	5	0	0
2019.11	ETAAS	53.99	6.6	27	3	2	1	0
2019.11	ICP-MS	55.89	8.92	39	5	5	0	0
2019.12	ETAAS	49.95	7.52	27	3	3	0	0
2019.12	ICP-MS	52.03	5.68	39	5	5	0	0
2019.13	ETAAS	22.07	3.25	24	3	2	1	0
2019.13	ICP-MS	22.14	3.04	38	5	5	0	0
2019.14	ETAAS	39.08	5.67	24	3	2	1	0
2019.14	ICP-MS	41	4.41	39	5	5	0	0
2019.15	ETAAS	5.4	3.2	23	3	2	1	0
2019.15	ICP-MS	3.34	2.35	37	5	5	0	0
2019.16	ETAAS	51.3	9.68	23	3	3	0	0
2019.16	ICP-MS	53.34	5.41	39	5	4	1	0
2019.17	ETAAS	18.09	3.21	19	3	3	0	0
2019.17	ICP-MS	17.66	2.89	38	5	4	1	0
2019.18	ETAAS	32.1	7.32	19	3	3	0	0
2019.18	ICP-MS	32.75	4.69	39	5	5	0	0
2019.19	ETAAS	10.26	1.25	21	3	3	0	0
2019.19	ICP-MS	9.72	2.02	37	5	5	0	0
2019.20	ETAAS	49.68	4.6	21	3	2	1	0
2019.20	ICP-MS	47.86	5.9	38	5	4	1	0
2019.21	ETAAS	55.6	6.15	21	3	2	1	0
2019.21	ICP-MS	54.52	6.13	38	5	5	0	0
2019.22	ETAAS	42.66	5.91	21	3	2	1	0
2019.22	ICP-MS	45.23	3.66	38	5	5	0	0
2019.23	ETAAS	24.57	3.27	20	2	2	0	0
2019.23	ICP-MS	25.65	3.11	38	5	5	0	0
2019.24	ETAAS	27.03	4.51	20	2	2	0	0
2019.24	ICP-MS	29.57	3.46	38	5	5	0	0

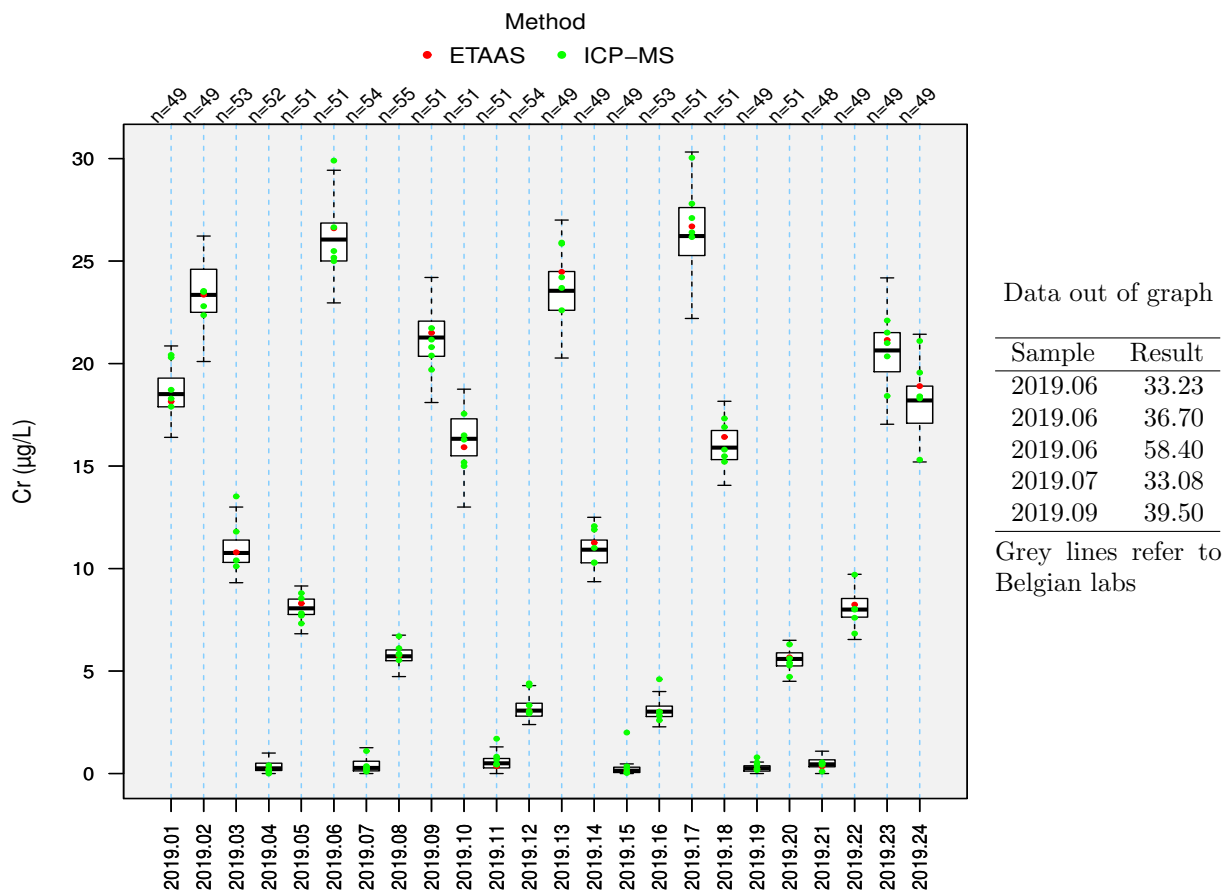
2.3.2 Co

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	20.8	0.89	35	5	5	0	0
2019.02	ICP-MS	26.46	1.32	35	5	5	0	0
2019.03	ICP-MS	12.32	0.58	39	4	3	1	0
2019.04	ICP-MS	0.49	0.1	40	5	5	0	0
2019.05	ICP-MS	9.43	0.45	38	5	5	0	0
2019.06	ICP-MS	29.11	1.6	38	5	5	0	0
2019.07	ICP-MS	0.29	0.11	39	5	5	0	0
2019.08	ICP-MS	6.66	0.57	40	5	5	0	0
2019.09	ICP-MS	23.55	1.4	38	5	5	0	0
2019.10	ICP-MS	17.9	1.09	38	5	5	0	0
2019.11	ICP-MS	0.97	0.13	39	5	5	0	0
2019.12	ICP-MS	3.86	0.25	40	5	5	0	0
2019.13	ICP-MS	26.4	1.39	37	5	5	0	0
2019.14	ICP-MS	12.33	0.88	37	5	4	1	0
2019.15	ICP-MS	0.15	0.07	37	5	5	0	0
2019.16	ICP-MS	3.88	0.27	39	5	5	0	0
2019.17	ICP-MS	29.41	1.55	37	5	5	0	0
2019.18	ICP-MS	18.04	0.96	37	5	5	0	0
2019.19	ICP-MS	0.5	0.11	36	5	5	0	0
2019.20	ICP-MS	6.63	0.3	37	5	5	0	0
2019.21	ICP-MS	0.94	0.15	37	5	5	0	0
2019.22	ICP-MS	9.49	0.46	37	5	5	0	0
2019.23	ICP-MS	23.37	1.18	36	5	5	0	0
2019.24	ICP-MS	20.73	0.8	36	5	5	0	0



2.3.3 Cr

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	18.82	0.6	11	1	1	0	0
2019.01	ICP-MS	18.4	1.18	37	5	5	0	0
2019.02	ETAAS	24.6	1.43	11	1	1	0	0
2019.02	ICP-MS	23.24	1.23	37	5	5	0	0
2019.03	ETAAS	10.8	0.28	11	1	1	0	0
2019.03	ICP-MS	10.7	0.99	41	4	4	0	0
2019.04	ETAAS	0.38	0.19	10	1	1	0	0
2019.04	ICP-MS	0.22	0.27	41	5	5	0	0
2019.05	ETAAS	8.18	0.27	10	1	1	0	0
2019.05	ICP-MS	8.04	0.63	40	5	5	0	0
2019.06	ETAAS	26.12	0.93	10	1	1	0	0
2019.06	ICP-MS	26.12	1.8	40	5	5	0	0
2019.07	ETAAS	0.32	0.22	11	1	1	0	0
2019.07	ICP-MS	0.28	0.4	42	5	5	0	0
2019.08	ETAAS	5.74	0.59	11	1	1	0	0
2019.08	ICP-MS	5.67	0.34	43	5	4	1	0
2019.09	ETAAS	21.27	0.76	11	1	1	0	0
2019.09	ICP-MS	21.29	1.69	40	5	5	0	0
2019.10	ETAAS	16.33	0.56	11	1	1	0	0
2019.10	ICP-MS	16.34	1.46	40	5	5	0	0
2019.11	ETAAS	0.45	0.26	10	1	1	0	0
2019.11	ICP-MS	0.48	0.37	40	5	4	1	0
2019.12	ETAAS	3.04	0.35	11	1	1	0	0
2019.12	ICP-MS	3.09	0.44	42	5	5	0	0
2019.13	ETAAS	23.87	1.79	10	1	1	0	0
2019.13	ICP-MS	23.35	1.29	38	5	5	0	0
2019.14	ETAAS	10.73	0.54	10	1	1	0	0
2019.14	ICP-MS	10.99	0.92	38	5	5	0	0
2019.15	ETAAS	0.1	0.09	9	1	1	0	0
2019.15	ICP-MS	0.18	0.24	39	5	4	1	0
2019.16	ETAAS	3.02	0.28	11	1	1	0	0
2019.16	ICP-MS	3.02	0.35	41	5	4	1	0
2019.17	ETAAS	26.21	1.28	11	1	1	0	0
2019.17	ICP-MS	26.27	1.94	39	5	5	0	0
2019.18	ETAAS	15.9	0.73	11	1	1	0	0
2019.18	ICP-MS	15.91	1.17	39	5	5	0	0
2019.19	ETAAS	0.27	0.15	11	1	1	0	0
2019.19	ICP-MS	0.26	0.19	37	5	5	0	0
2019.20	ETAAS	5.81	0.44	11	1	1	0	0
2019.20	ICP-MS	5.51	0.45	39	5	5	0	0
2019.21	ETAAS	0.44	0.16	11	1	1	0	0
2019.21	ICP-MS	0.48	0.26	36	5	5	0	0
2019.22	ETAAS	8.11	0.51	11	1	1	0	0
2019.22	ICP-MS	8	0.55	37	5	4	1	0
2019.23	ETAAS	20.1	1.65	11	1	1	0	0
2019.23	ICP-MS	20.7	1.31	37	5	5	0	0
2019.24	ETAAS	17.9	1.07	11	1	1	0	0
2019.24	ICP-MS	18.2	1.4	37	5	5	0	0



2.3.4 Cu

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	Colorimetry	1207.45	207.87	12	3	3	0	0
2019.01	ETAAS	1170	68.31	11	3	3	0	0
2019.01	FAAS	1171.12	100.26	50	10	8	2	0
2019.01	ICP-MS	1154.06	60.63	53	10	9	1	0
2019.01	Others	1361.24	0	1	1	0	0	1
2019.01	Global	1169.88	86.68	132	27	24	3	0
2019.02	Colorimetry	953.25	179.37	11	3	3	0	0
2019.02	ETAAS	910	50.78	11	3	3	0	0
2019.02	FAAS	936.55	73.01	50	10	8	2	0
2019.02	ICP-MS	930.41	45.38	52	9	9	0	0
2019.02	Others	1104.5	0	1	1	0	0	1
2019.02	Global	932.05	64.25	130	26	24	2	0
2019.03	Colorimetry	1517.88	210.7	12	3	3	0	0
2019.03	ETAAS	1492.47	85.96	12	3	2	1	0
2019.03	FAAS	1523.42	90.02	46	9	9	0	0
2019.03	ICP-MS	1518.85	77.06	54	9	7	2	0
2019.03	Others	1466.1	0	1	1	0	0	1
2019.03	Global	1517.42	99.49	130	25	23	2	0
2019.04	Colorimetry	362	80.26	12	3	3	0	0
2019.04	ETAAS	428.97	45.16	12	3	3	0	0
2019.04	FAAS	410.99	49.54	46	9	9	0	0
2019.04	ICP-MS	406.72	21.9	54	9	9	0	0
2019.04	Others	453.75	0	1	1	0	0	1
2019.04	Global	406.86	39.29	130	25	25	0	0
2019.05	Colorimetry	1640	210.47	11	3	3	0	0
2019.05	ETAAS	1623	87.88	11	3	3	0	0
2019.05	FAAS	1633.44	108.46	46	9	9	0	0
2019.05	ICP-MS	1644.5	80.76	53	8	8	0	0
2019.06	Colorimetry	762.6	166.05	11	3	3	0	0
2019.06	ETAAS	826.15	61.15	11	3	3	0	0
2019.06	FAAS	813.44	62.56	44	9	9	0	0
2019.06	ICP-MS	800.73	43	53	8	8	0	0
2019.07	Colorimetry	1080	121.94	11	3	3	0	0
2019.07	ETAAS	1160	53.95	11	3	3	0	0
2019.07	FAAS	1130.6	79.38	46	10	10	0	0
2019.07	ICP-MS	1138.23	61.22	54	9	9	0	0
2019.07	Others	1315.49	0	1	1	0	0	1
2019.07	Global	1140.5	74.31	128	26	26	0	0
2019.08	Colorimetry	1750	182.13	11	3	3	0	0
2019.08	ETAAS	1810	52.5	11	3	2	1	0
2019.08	FAAS	1766	120.35	45	10	8	2	0
2019.08	ICP-MS	1762.04	75.58	54	9	9	0	0
2019.08	Others	2023.43	0	1	1	0	0	1
2019.08	Global	1766.69	97.65	127	26	24	2	0
2019.09	Colorimetry	1090.6	203.92	10	2	2	0	0
2019.09	ETAAS	1079	47.49	11	3	3	0	0
2019.09	FAAS	1065.64	66.69	46	9	8	1	0
2019.09	ICP-MS	1053	49.43	55	9	9	0	0
2019.09	Others	1258.29	0	1	1	0	0	1
2019.09	Global	1061.29	63.3	127	24	21	3	0
2019.10	Colorimetry	1333	218.96	10	2	2	0	0
2019.10	ETAAS	1315.49	84.28	11	3	3	0	0
2019.10	FAAS	1285.18	78.28	46	9	8	1	0
2019.10	ICP-MS	1286.25	72.65	55	9	9	0	0
2019.10	Others	1467.37	0	1	1	0	0	1
2019.10	Global	1293	94.44	127	24	23	1	0
2019.11	Colorimetry	1900	171.13	11	3	3	0	0
2019.11	ETAAS	1957.34	51.68	11	3	2	1	0
2019.11	FAAS	1987.5	136.9	44	8	8	0	0
2019.11	ICP-MS	2034.98	143.35	54	10	10	0	0
2019.11	Others	1887.44	0	1	1	0	0	1

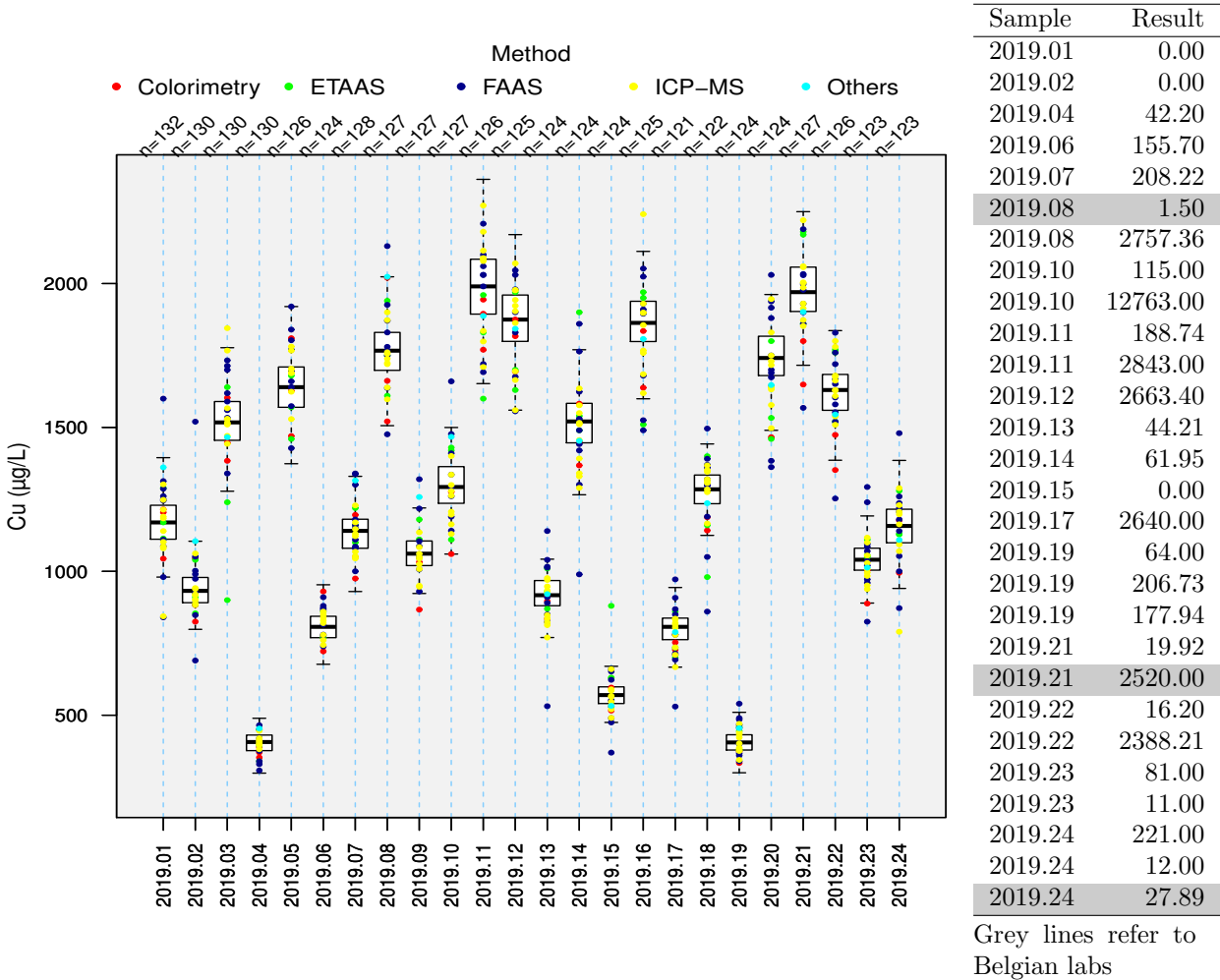
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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.11	Global	1990	140.28	126	25	25	0	0
2019.12	Colorimetry	1817	203.07	11	3	3	0	0
2019.12	ETAAS	1893.79	112.28	11	3	3	0	0
2019.12	FAAS	1870	115.12	43	8	8	0	0
2019.12	ICP-MS	1890.39	127.7	54	10	10	0	0
2019.12	Others	1842.95	0	1	1	0	0	1
2019.12	Global	1874.73	119.35	125	25	25	0	0
2019.13	Colorimetry	931.25	117.64	12	3	3	0	0
2019.13	ETAAS	925.74	40.6	10	3	3	0	0
2019.13	FAAS	940.54	84.36	45	9	8	1	0
2019.13	ICP-MS	914.48	51.53	51	10	10	0	0
2019.13	Others	920.84	0	1	1	0	0	1
2019.13	Global	917	63.52	124	26	24	2	0
2019.14	Colorimetry	1581.25	195.61	12	3	3	0	0
2019.14	ETAAS	1509.32	60.08	10	3	2	1	0
2019.14	FAAS	1542	103.64	45	9	7	2	0
2019.14	ICP-MS	1499.78	108	51	10	10	0	0
2019.14	Others	1453.39	0	1	1	0	0	1
2019.14	Global	1520.7	100.39	124	26	23	3	0
2019.15	Colorimetry	516	73.37	11	2	2	0	0
2019.15	ETAAS	571.95	52.76	10	3	2	1	0
2019.15	FAAS	576.07	48.54	44	9	8	1	0
2019.15	ICP-MS	568	40.04	53	9	9	0	0
2019.15	Others	532.55	0	1	1	0	0	1
2019.15	Global	570.02	42.59	124	24	22	2	0
2019.16	Colorimetry	1835	286.82	11	2	2	0	0
2019.16	ETAAS	1894.75	82.66	10	3	2	1	0
2019.16	FAAS	1869.01	91.28	44	9	7	2	0
2019.16	ICP-MS	1875.87	118.92	54	9	8	1	0
2019.16	Others	1807.36	0	1	1	0	0	1
2019.16	Global	1863.3	103.64	125	24	20	4	0
2019.17	Colorimetry	753	194.37	11	2	2	0	0
2019.17	ETAAS	820.43	50.26	10	3	3	0	0
2019.17	FAAS	808.55	58.95	40	10	9	1	0
2019.17	ICP-MS	812.56	41.59	54	9	8	1	0
2019.17	Others	788.66	0	1	1	0	0	1
2019.17	Global	807.09	55.45	121	25	24	1	0
2019.18	Colorimetry	1269	265.26	11	2	2	0	0
2019.18	ETAAS	1276.72	73.71	10	3	2	1	0
2019.18	FAAS	1293	70.66	41	10	8	2	0
2019.18	ICP-MS	1289.5	58.65	54	9	9	0	0
2019.18	Others	1236.68	0	1	1	0	0	1
2019.18	Global	1284.9	73.61	122	25	22	3	0
2019.19	Colorimetry	353.5	101.66	10	2	2	0	0
2019.19	ETAAS	432.75	29.88	10	3	3	0	0
2019.19	FAAS	409.95	48.68	44	10	10	0	0
2019.19	ICP-MS	403.22	25.35	54	10	10	0	0
2019.19	Others	455.02	0	1	1	0	0	1
2019.19	Global	405.38	38.92	124	26	25	1	0
2019.20	Colorimetry	1764.5	278.43	10	2	2	0	0
2019.20	ETAAS	1719.03	73.93	10	3	2	1	0
2019.20	FAAS	1750.5	152.35	44	10	10	0	0
2019.20	ICP-MS	1741.27	69.17	54	10	9	1	0
2019.20	Others	1647.22	0	1	1	0	0	1
2019.20	Global	1741.27	98.72	124	26	24	2	0
2019.21	Colorimetry	1765	311.9	10	2	2	0	0
2019.21	ETAAS	1953.21	75.16	10	3	2	1	0
2019.21	FAAS	1962.1	89.54	45	10	8	2	0
2019.21	ICP-MS	2013.77	109.9	56	10	10	0	0
2019.21	Others	1901.42	0	1	1	0	0	1
2019.21	Global	1970.05	114.22	127	26	24	2	0
2019.22	Colorimetry	1548.5	321.12	10	2	2	0	0
2019.22	ETAAS	1645.94	73.9	10	3	3	0	0

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.22	FAAS	1617.35	76.72	44	10	9	1	0
2019.22	ICP-MS	1648.93	83.51	56	10	10	0	0
2019.22	Others	1544.9	0	1	1	0	0	1
2019.22	Global	1630	92.29	126	26	24	2	0
2019.23	Colorimetry	1017.5	154.09	10	2	2	0	0
2019.23	ETAAS	1053	43.85	10	3	3	0	0
2019.23	FAAS	1036	56.01	45	10	7	3	0
2019.23	ICP-MS	1043.11	57.47	52	9	9	0	0
2019.23	Others	1012.99	0	1	1	0	0	1
2019.23	Global	1040.31	56.56	123	25	22	3	0
2019.24	Colorimetry	1178.5	152.49	10	2	2	0	0
2019.24	ETAAS	1143.9	64.6	10	3	3	0	0
2019.24	FAAS	1160	75.38	45	10	8	2	0
2019.24	ICP-MS	1162.49	85.25	52	9	7	2	0
2019.24	Others	1108.95	0	1	1	0	0	1
2019.24	Global	1157.6	86.4	123	25	21	4	0

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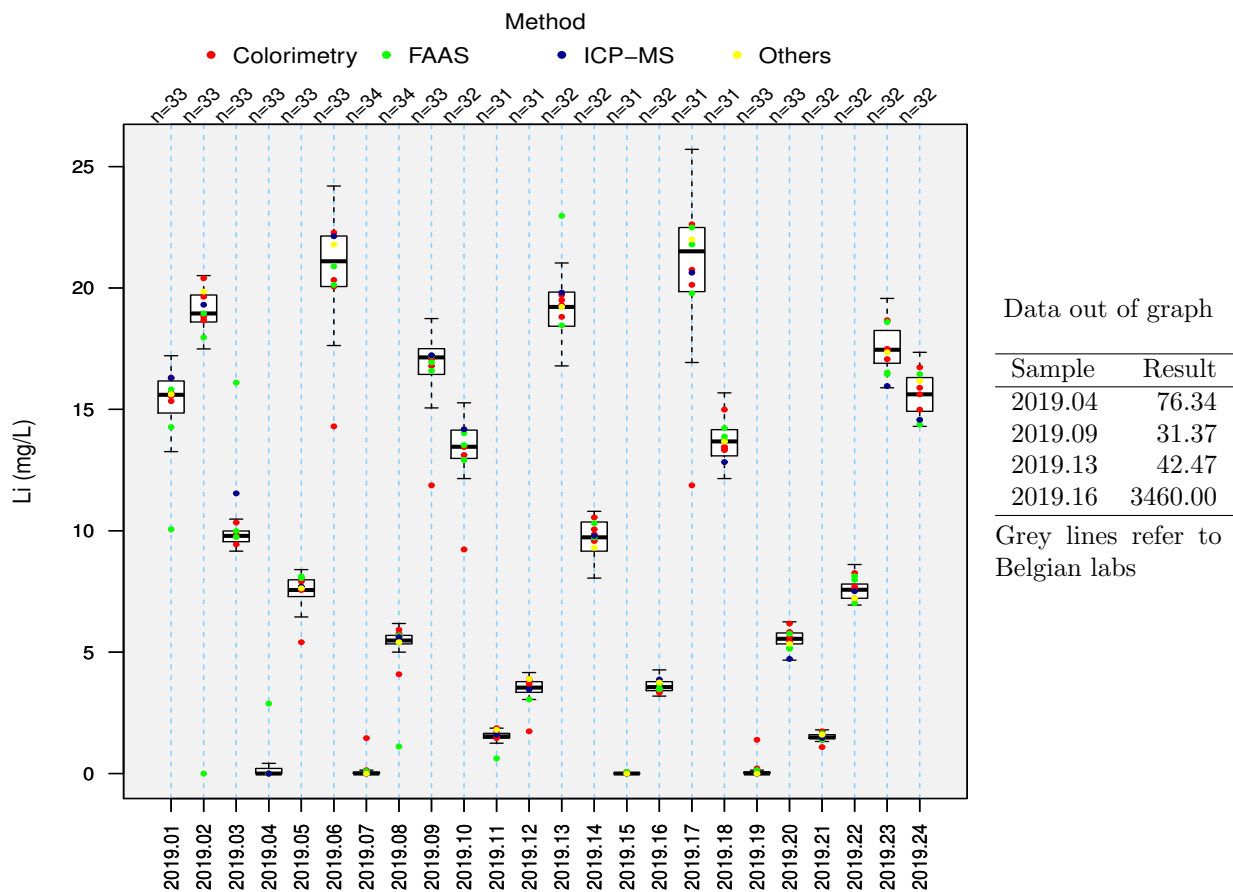


2.3.5 Li

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	Colorimetry	15.45	0.53	10	4	4	0	0
2019.01	FAAS	15.48	1.14	11	3	2	1	0
2019.01	ICP-MS	15.65	0.76	8	1	1	0	0
2019.01	Others	16.34	0.54	2	1	0	0	1
2019.01	Global	15.6	0.98	33	9	8	1	0
2019.02	Colorimetry	18.88	0.72	10	4	4	0	0
2019.02	FAAS	18.95	0.98	11	3	2	1	0
2019.02	ICP-MS	19	1.02	8	1	1	0	0
2019.02	Others	20.75	0.67	2	1	0	0	1
2019.02	Global	18.95	0.82	33	9	8	1	0
2019.03	Colorimetry	9.79	0.25	10	4	4	0	0
2019.03	FAAS	9.99	0.39	11	3	2	1	0
2019.03	ICP-MS	9.72	0.26	9	1	0	1	0
2019.04	Colorimetry	0.18	0.3	10	4	4	0	0
2019.04	FAAS	0	0.1	11	3	2	1	0
2019.04	ICP-MS	0	0	9	1	0	0	1
2019.04	Global	0	0.16	33	8	7	1	0
2019.05	Colorimetry	7.77	0.77	9	4	3	1	0
2019.05	FAAS	7.73	0.48	10	2	2	0	0
2019.05	ICP-MS	7.49	0.36	10	1	1	0	0
2019.05	Others	7.84	0.16	2	1	0	0	1
2019.05	Global	7.56	0.51	33	8	7	1	0
2019.06	Colorimetry	20.06	3.7	9	4	4	0	0
2019.06	FAAS	21.41	1.48	10	2	2	0	0
2019.06	ICP-MS	21.41	0.76	10	1	1	0	0
2019.06	Others	22.59	0.59	2	1	0	0	1
2019.06	Global	21.1	1.54	33	8	7	1	0
2019.07	Colorimetry	0	0.16	9	4	3	1	0
2019.07	FAAS	0	0	11	3	0	1	2
2019.07	ICP-MS	0	0.01	10	1	1	0	0
2019.07	Others	0	0	2	1	0	0	1
2019.07	Global	0	0.04	34	9	7	2	0
2019.08	Colorimetry	5.62	0.16	9	4	3	1	0
2019.08	FAAS	5.48	0.18	11	3	2	1	0
2019.08	ICP-MS	5.54	0.44	10	1	1	0	0
2019.08	Others	5.8	0.29	2	1	0	0	1
2019.08	Global	5.48	0.25	34	9	7	2	0
2019.09	Colorimetry	16.93	1.5	10	4	3	1	0
2019.09	FAAS	17.14	0.72	11	3	3	0	0
2019.09	ICP-MS	17.23	0.44	9	1	1	0	0
2019.10	Colorimetry	13.46	0.81	10	4	3	1	0
2019.10	FAAS	13.32	0.75	11	3	3	0	0
2019.10	ICP-MS	13.46	1.17	9	1	1	0	0
2019.11	Colorimetry	1.55	0.21	9	4	4	0	0
2019.11	FAAS	1.46	0.12	9	1	0	1	0
2019.11	ICP-MS	1.53	0.06	9	1	1	0	0
2019.11	Others	1.77	0.02	2	1	0	0	1
2019.11	Global	1.53	0.14	31	7	6	1	0
2019.12	Colorimetry	3.69	0.31	9	4	3	1	0
2019.12	FAAS	3.47	0.21	9	1	1	0	0
2019.12	ICP-MS	3.54	0.12	9	1	1	0	0
2019.12	Others	3.75	0.1	2	1	0	0	1
2019.12	Global	3.54	0.33	31	7	6	1	0
2019.13	Colorimetry	19.16	0.86	10	4	4	0	0
2019.13	FAAS	19.59	0.82	10	2	1	1	0
2019.13	ICP-MS	18.7	1.96	8	1	1	0	0
2019.13	Others	19.71	0.36	2	1	0	0	1
2019.13	Global	19.22	1.02	32	8	7	1	0
2019.14	Colorimetry	9.82	0.52	10	4	4	0	0
2019.14	FAAS	9.72	0.63	10	2	2	0	0
2019.14	ICP-MS	9.77	1.36	8	1	1	0	0

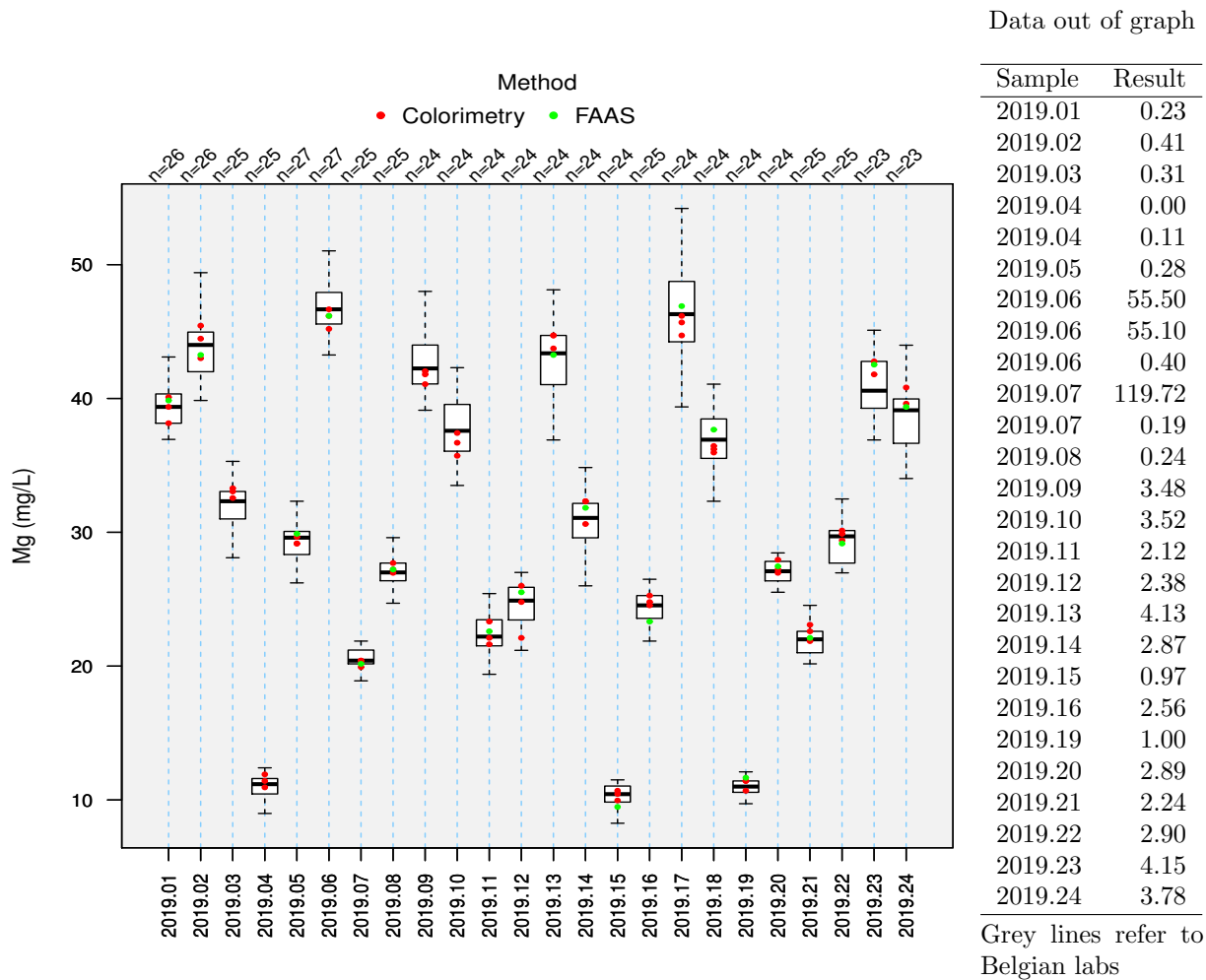
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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.14	Others	9.54	0.18	2	1	0	0	1
2019.14	Global	9.73	0.85	32	8	8	0	0
2019.15	Colorimetry	0	0.05	9	4	4	0	0
2019.15	FAAS	0	0.02	9	3	2	1	0
2019.15	ICP-MS	0	0	9	1	0	0	1
2019.15	Others	0	0	2	1	0	0	1
2019.15	Global	0	0.01	31	9	6	3	0
2019.16	Colorimetry	3.47	0.31	9	4	4	0	0
2019.16	FAAS	3.48	0.18	10	3	3	0	0
2019.16	ICP-MS	3.68	0.25	9	1	1	0	0
2019.16	Others	3.75	0	2	1	0	0	1
2019.16	Global	3.56	0.26	32	9	9	0	0
2019.17	Colorimetry	20.13	2.16	9	4	3	1	0
2019.17	FAAS	21.4	1.44	9	3	3	0	0
2019.17	ICP-MS	22.2	2.62	9	1	1	0	0
2019.17	Others	22.24	0.18	2	1	0	0	1
2019.17	Global	21.51	1.96	31	9	8	1	0
2019.18	Colorimetry	13.46	0.52	9	4	4	0	0
2019.18	FAAS	13.74	0.43	9	3	3	0	0
2019.18	ICP-MS	13.68	1.88	9	1	1	0	0
2019.18	Others	13.98	0.23	2	1	0	0	1
2019.18	Global	13.68	0.8	31	9	9	0	0
2019.19	Colorimetry	0.07	0.23	10	4	3	1	0
2019.19	FAAS	0	0	10	3	0	1	2
2019.19	ICP-MS	0	0	9	1	0	0	1
2019.19	Others	0	0	2	1	0	0	1
2019.19	Global	0	0.05	33	9	7	2	0
2019.20	Colorimetry	5.8	0.34	10	4	4	0	0
2019.20	FAAS	5.45	0.3	10	3	3	0	0
2019.20	ICP-MS	5.53	0.3	9	1	1	0	0
2019.20	Others	5.8	0.34	2	1	0	0	1
2019.20	Global	5.55	0.33	33	9	9	0	0
2019.21	Colorimetry	1.46	0.26	9	4	4	0	0
2019.21	FAAS	1.47	0.11	10	3	3	0	0
2019.21	ICP-MS	1.49	0.1	9	1	1	0	0
2019.21	Others	1.7	0.07	2	1	0	0	1
2019.21	Global	1.48	0.11	32	9	8	1	0
2019.22	Colorimetry	7.63	0.36	9	4	4	0	0
2019.22	FAAS	7.33	0.47	10	3	3	0	0
2019.22	ICP-MS	7.64	0.33	9	1	1	0	0
2019.22	Others	7.53	0.23	2	1	0	0	1
2019.22	Global	7.57	0.42	32	9	9	0	0
2019.23	Colorimetry	17.49	0.57	9	4	4	0	0
2019.23	FAAS	16.83	1.07	10	3	3	0	0
2019.23	ICP-MS	18.04	0.75	9	1	1	0	0
2019.23	Others	18.05	0.52	2	1	0	0	1
2019.23	Global	17.45	0.96	32	9	9	0	0
2019.24	Colorimetry	15.75	0.3	9	4	3	1	0
2019.24	FAAS	15.22	1.04	10	3	3	0	0
2019.24	ICP-MS	15.67	0.9	9	1	1	0	0
2019.24	Others	16.41	0.18	2	1	0	0	1
2019.24	Global	15.62	0.95	32	9	9	0	0



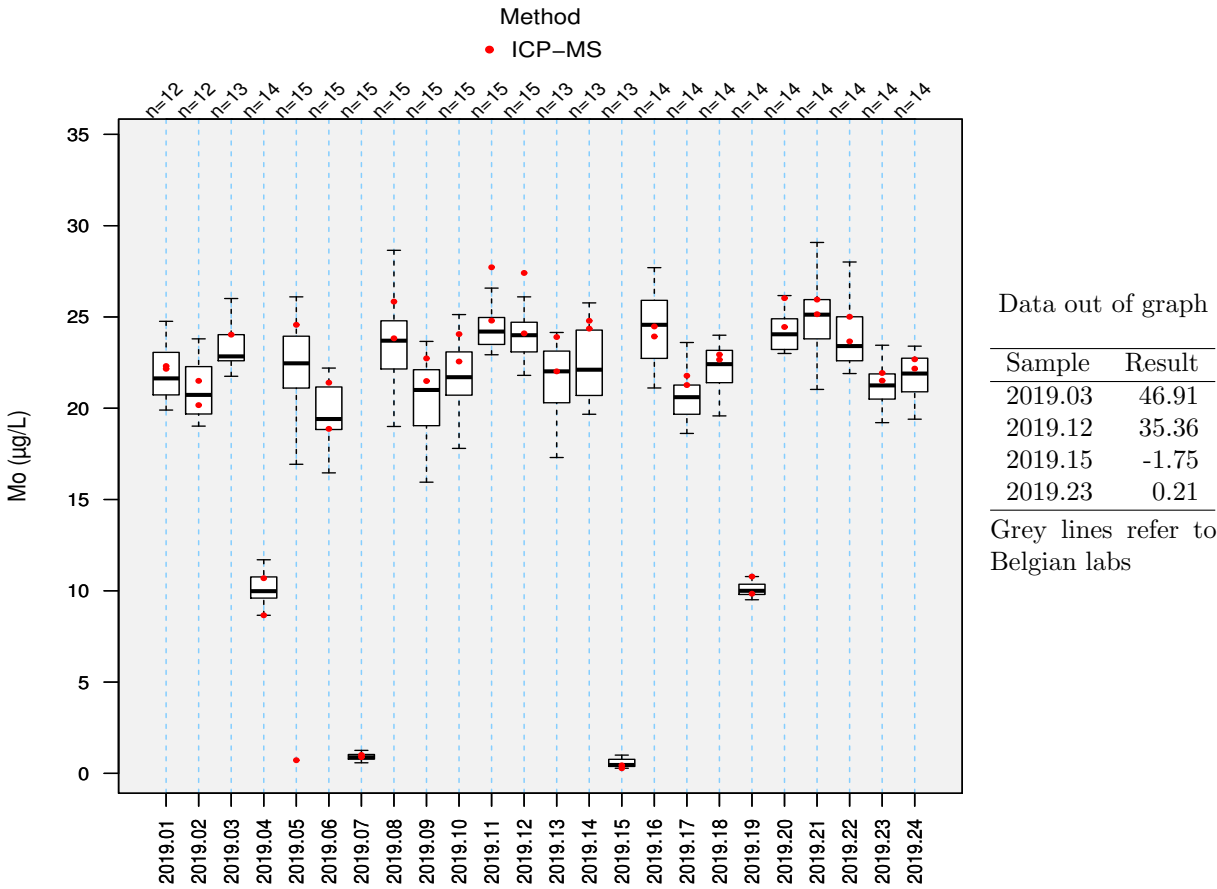
2.3.6 Mg

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	Colorimetry	39.37	1.46	7	3	3	0	0
2019.01	FAAS	39.85	2.36	7	1	1	0	0
2019.02	Colorimetry	44	1.82	7	3	3	0	0
2019.02	FAAS	44.23	3.24	7	1	1	0	0
2019.03	Colorimetry	33	0.29	7	3	3	0	0
2019.04	Colorimetry	11.7	0.57	7	3	3	0	0
2019.05	Colorimetry	29.16	0.36	6	3	3	0	0
2019.05	FAAS	29.89	1.22	7	1	1	0	0
2019.06	Colorimetry	46.41	1.09	6	3	3	0	0
2019.06	FAAS	47.63	3.54	7	1	1	0	0
2019.07	Colorimetry	20.41	0.39	6	3	3	0	0
2019.07	FAAS	21.4	1.03	7	1	1	0	0
2019.08	Colorimetry	27.26	0.42	6	3	3	0	0
2019.08	FAAS	27	1.25	7	1	1	0	0
2019.09	Colorimetry	42	1.17	7	3	3	0	0
2019.10	Colorimetry	38	1.52	7	3	3	0	0
2019.11	Colorimetry	22.11	1.37	7	3	3	0	0
2019.11	FAAS	23.1	1.23	6	1	1	0	0
2019.12	Colorimetry	25	1.56	7	3	3	0	0
2019.12	FAAS	25.65	0.86	6	1	1	0	0
2019.13	Colorimetry	44.71	1.06	7	3	3	0	0
2019.13	FAAS	43.44	1.74	6	1	1	0	0
2019.14	Colorimetry	32.32	0.85	7	3	3	0	0
2019.14	FAAS	30.68	1.01	6	1	1	0	0
2019.15	Colorimetry	10.84	0.36	6	3	3	0	0
2019.15	FAAS	10.3	1.36	5	1	0	0	1
2019.15	Global	10.43	0.83	24	4	4	0	0
2019.16	Colorimetry	25.13	0.67	6	3	3	0	0
2019.16	FAAS	24.5	1.73	6	1	1	0	0
2019.17	Colorimetry	46.23	0.76	6	3	3	0	0
2019.17	FAAS	46.3	2.15	5	1	0	0	1
2019.17	Global	46.3	3.22	24	4	4	0	0
2019.18	Colorimetry	36.73	0.6	6	3	3	0	0
2019.18	FAAS	37.67	1.55	5	1	0	0	1
2019.18	Global	36.92	2.01	24	4	4	0	0
2019.19	Colorimetry	11	0.27	7	3	3	0	0
2019.19	FAAS	11.47	0.42	5	1	0	0	1
2019.19	Global	11	0.59	24	4	4	0	0
2019.20	Colorimetry	27	0.44	7	3	3	0	0
2019.20	FAAS	27.46	0.95	5	1	0	0	1
2019.20	Global	27.09	0.98	24	4	4	0	0
2019.21	Colorimetry	22.3	0.79	6	3	3	0	0
2019.21	FAAS	21.11	1.02	6	1	1	0	0
2019.22	Colorimetry	29.64	0.65	6	3	3	0	0
2019.22	FAAS	29.04	1.16	6	1	1	0	0
2019.23	Colorimetry	41.8	2.05	5	2	0	0	2
2019.23	FAAS	41.31	3.03	6	1	1	0	0
2019.23	Global	40.58	2.59	23	3	3	0	0
2019.24	Colorimetry	39.61	2.83	5	2	0	0	2
2019.24	FAAS	38.64	2.68	6	1	1	0	0
2019.24	Global	39.12	2.46	23	3	3	0	0



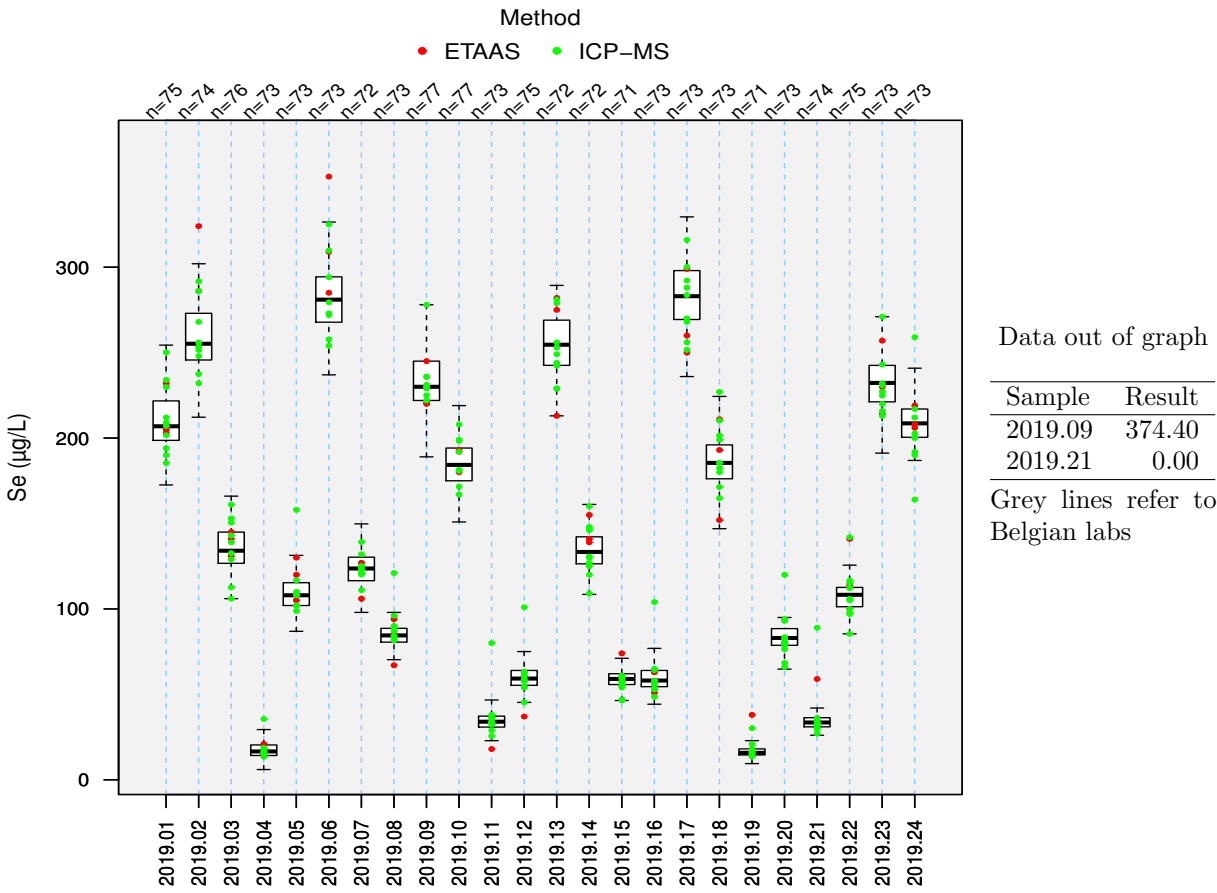
2.3.7 Mo

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	21.63	1.49	12	2	2	0	0
2019.02	ICP-MS	20.73	1.87	12	2	2	0	0
2019.03	ICP-MS	22.84	1.06	13	1	1	0	0
2019.04	ICP-MS	9.98	0.83	14	2	2	0	0
2019.05	ICP-MS	22.46	2.11	15	2	1	1	0
2019.06	ICP-MS	19.41	1.73	15	2	2	0	0
2019.07	ICP-MS	0.88	0.19	15	2	2	0	0
2019.08	ICP-MS	23.7	1.96	15	2	2	0	0
2019.09	ICP-MS	21	2.27	15	2	2	0	0
2019.10	ICP-MS	21.7	1.76	15	2	2	0	0
2019.11	ICP-MS	24.2	1.09	15	2	1	1	0
2019.12	ICP-MS	24	1.2	15	2	2	0	0
2019.13	ICP-MS	22.02	2.1	13	2	2	0	0
2019.14	ICP-MS	22.11	2.65	13	2	2	0	0
2019.15	ICP-MS	0.46	0.29	13	2	2	0	0
2019.16	ICP-MS	24.57	1.99	14	2	2	0	0
2019.17	ICP-MS	20.61	1.12	14	2	2	0	0
2019.18	ICP-MS	22.41	1.21	14	2	2	0	0
2019.19	ICP-MS	10	0.37	14	2	2	0	0
2019.20	ICP-MS	24.05	1.15	14	2	2	0	0
2019.21	ICP-MS	25.12	1.53	14	2	2	0	0
2019.22	ICP-MS	23.41	1.68	14	2	2	0	0
2019.23	ICP-MS	21.25	0.95	14	2	2	0	0
2019.24	ICP-MS	21.9	1.31	14	2	2	0	0



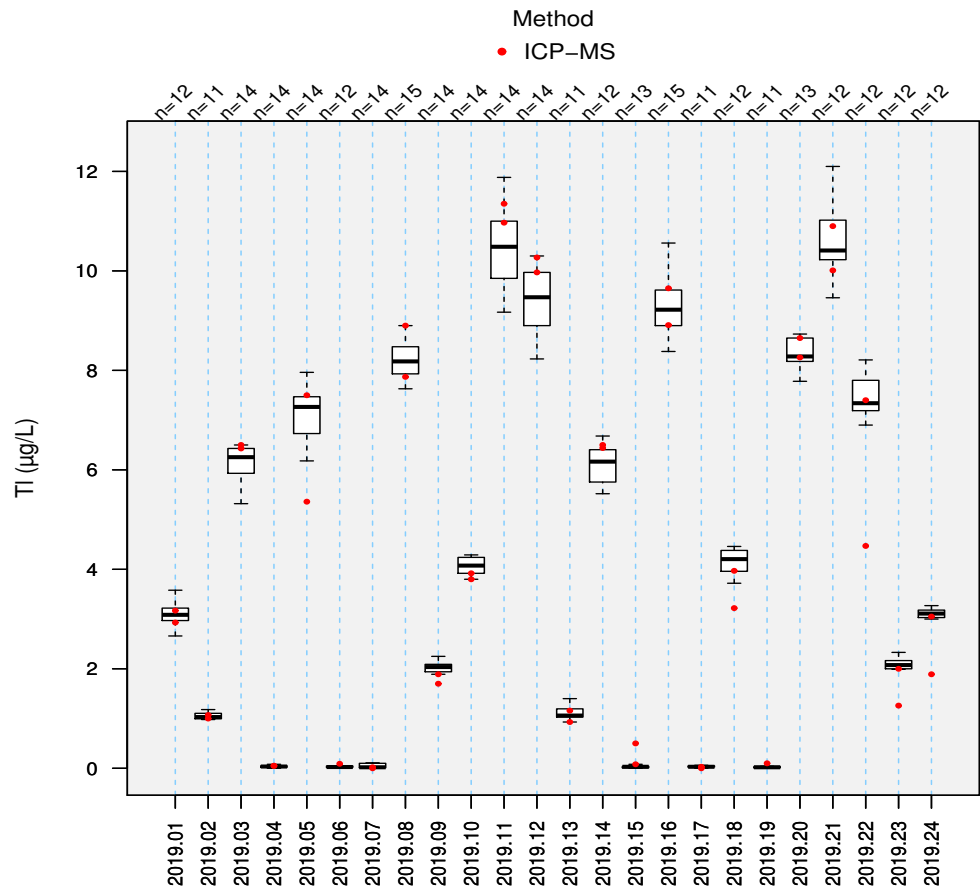
2.3.8 Se

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	208.23	25.33	22	3	3	0	0
2019.01	ICP-MS	206.62	15.71	52	10	10	0	0
2019.02	ETAAS	265.44	25.12	22	3	3	0	0
2019.02	ICP-MS	252.8	16.4	51	9	9	0	0
2019.03	ETAAS	131	15.43	21	3	3	0	0
2019.03	ICP-MS	135.88	12.99	54	9	9	0	0
2019.04	ETAAS	16.59	4.94	19	2	2	0	0
2019.04	ICP-MS	16.02	2.64	53	8	7	1	0
2019.05	ETAAS	108.88	13.22	18	3	3	0	0
2019.05	ICP-MS	108.12	8.65	54	8	7	1	0
2019.06	ETAAS	276.67	28.09	18	3	3	0	0
2019.06	ICP-MS	281.32	18.53	54	8	8	0	0
2019.07	ETAAS	122.45	16.62	18	3	3	0	0
2019.07	ICP-MS	124.27	8.9	53	9	9	0	0
2019.08	ETAAS	83.74	8.41	19	3	3	0	0
2019.08	ICP-MS	84.53	5.49	53	9	8	1	0
2019.09	ETAAS	220.5	23.27	22	3	3	0	0
2019.09	ICP-MS	230.98	17.84	55	9	9	0	0
2019.10	ETAAS	180.85	13.92	22	3	3	0	0
2019.10	ICP-MS	184.86	14.72	55	9	9	0	0
2019.11	ETAAS	30.3	4.28	19	2	2	0	0
2019.11	ICP-MS	34.76	3.57	54	10	9	1	0
2019.12	ETAAS	55.3	6.67	21	3	3	0	0
2019.12	ICP-MS	60.02	5.81	54	10	9	1	0
2019.13	ETAAS	257.54	24.66	20	3	3	0	0
2019.13	ICP-MS	254.22	17.11	52	10	10	0	0
2019.14	ETAAS	133.51	14.33	20	3	3	0	0
2019.14	ICP-MS	133.35	11.56	52	10	10	0	0
2019.15	ETAAS	60.5	10.38	18	3	3	0	0
2019.15	ICP-MS	58.46	4.48	52	9	9	0	0
2019.16	ETAAS	54.5	9.8	19	3	3	0	0
2019.16	ICP-MS	59.25	6.09	53	9	8	1	0
2019.17	ETAAS	279.8	28.54	19	3	3	0	0
2019.17	ICP-MS	283.69	19.58	53	9	9	0	0
2019.18	ETAAS	184.86	17	19	3	3	0	0
2019.18	ICP-MS	185.47	14.96	53	9	9	0	0
2019.19	ETAAS	15.01	5.93	17	2	1	1	0
2019.19	ICP-MS	15.8	2.22	53	10	9	1	0
2019.20	ETAAS	80.6	12.2	19	3	3	0	0
2019.20	ICP-MS	83.45	5.86	53	10	9	1	0
2019.21	ETAAS	32.39	9.13	19	2	2	0	0
2019.21	ICP-MS	33.72	3.34	55	10	9	1	0
2019.22	ETAAS	106.07	10.77	20	3	2	1	0
2019.22	ICP-MS	108.26	7.32	55	10	8	2	0
2019.23	ETAAS	231.3	15.53	19	3	3	0	0
2019.23	ICP-MS	233.05	16.16	53	9	9	0	0
2019.24	ETAAS	208	13.93	19	3	3	0	0
2019.24	ICP-MS	208.87	11.11	53	9	7	2	0



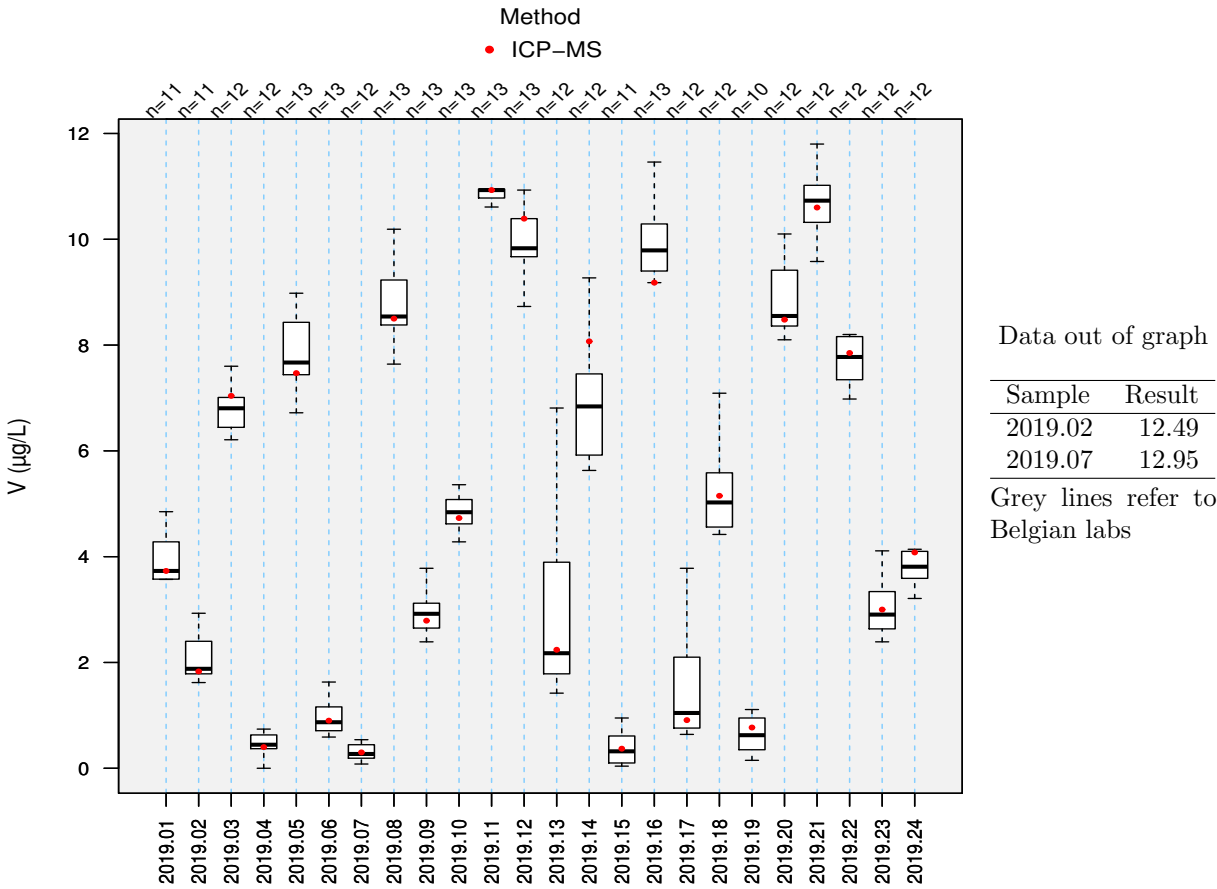
2.3.9 Tl

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	3.08	0.16	12	2	2	0	0
2019.02	ICP-MS	1.03	0.08	11	2	2	0	0
2019.03	ICP-MS	6.25	0.32	14	2	2	0	0
2019.04	ICP-MS	0.04	0.02	14	2	2	0	0
2019.05	ICP-MS	7.26	0.52	14	2	1	1	0
2019.06	ICP-MS	0.02	0.02	12	1	0	1	0
2019.07	ICP-MS	0.02	0.05	14	2	2	0	0
2019.08	ICP-MS	8.18	0.4	15	2	2	0	0
2019.09	ICP-MS	2.04	0.11	14	2	1	1	0
2019.10	ICP-MS	4.08	0.21	14	2	2	0	0
2019.11	ICP-MS	10.48	0.82	14	2	2	0	0
2019.12	ICP-MS	9.47	0.73	14	2	2	0	0
2019.13	ICP-MS	1.06	0.12	11	2	2	0	0
2019.14	ICP-MS	6.16	0.44	12	2	2	0	0
2019.15	ICP-MS	0.03	0.02	13	2	1	1	0
2019.16	ICP-MS	9.22	0.53	15	2	2	0	0
2019.17	ICP-MS	0.03	0.02	11	2	2	0	0
2019.18	ICP-MS	4.21	0.28	12	2	1	1	0
2019.19	ICP-MS	0.02	0.02	11	1	0	1	0
2019.20	ICP-MS	8.28	0.35	13	2	2	0	0
2019.21	ICP-MS	10.41	0.57	12	2	2	0	0
2019.22	ICP-MS	7.34	0.39	12	2	1	1	0
2019.23	ICP-MS	2.08	0.12	12	2	1	1	0
2019.24	ICP-MS	3.11	0.1	12	2	1	1	0



2.3.10 V

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	3.73	0.52	11	1	1	0	0
2019.02	ICP-MS	1.88	0.46	11	1	1	0	0
2019.03	ICP-MS	6.8	0.32	12	1	1	0	0
2019.04	ICP-MS	0.44	0.17	12	1	1	0	0
2019.05	ICP-MS	7.67	0.73	13	1	1	0	0
2019.06	ICP-MS	0.87	0.33	13	1	1	0	0
2019.07	ICP-MS	0.27	0.15	12	1	1	0	0
2019.08	ICP-MS	8.54	0.63	13	1	1	0	0
2019.09	ICP-MS	2.92	0.35	13	1	1	0	0
2019.10	ICP-MS	4.84	0.34	13	1	1	0	0
2019.11	ICP-MS	10.93	0.13	13	1	1	0	0
2019.12	ICP-MS	9.83	0.53	13	1	1	0	0
2019.13	ICP-MS	2.17	1.39	12	1	1	0	0
2019.14	ICP-MS	6.84	0.91	12	1	1	0	0
2019.15	ICP-MS	0.32	0.38	11	1	1	0	0
2019.16	ICP-MS	9.79	0.66	13	1	1	0	0
2019.17	ICP-MS	1.04	0.98	12	1	1	0	0
2019.18	ICP-MS	5.03	0.66	12	1	1	0	0
2019.19	ICP-MS	0.62	0.42	10	1	1	0	0
2019.20	ICP-MS	8.55	0.59	12	1	1	0	0
2019.21	ICP-MS	10.73	0.43	12	1	1	0	0
2019.22	ICP-MS	7.78	0.55	12	1	1	0	0
2019.23	ICP-MS	2.91	0.48	12	1	1	0	0
2019.24	ICP-MS	3.81	0.36	12	1	1	0	0



2.3.11 Zn

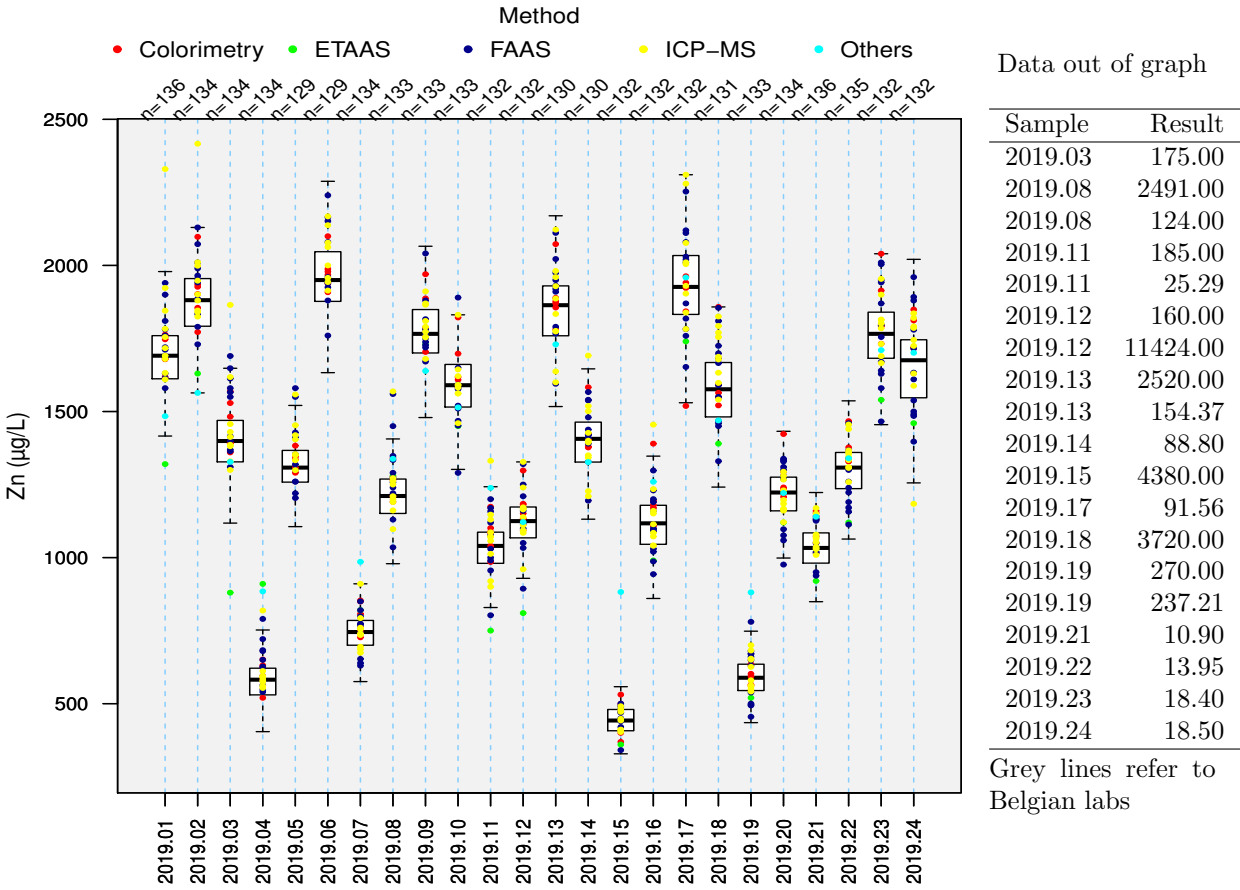
Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	Colorimetry	1680	122.49	22	6	6	0	0
2019.01	ETAAS	1697.13	174.73	4	1	0	0	1
2019.01	FAAS	1700.4	125.17	51	12	12	0	0
2019.01	ICP-MS	1690	86.95	53	10	9	1	0
2019.01	Others	1483.93	0	1	1	0	0	1
2019.01	Global	1691	108.56	136	30	28	2	0
2019.02	Colorimetry	1902	145.7	21	6	6	0	0
2019.02	ETAAS	1863.9	124.55	4	1	0	0	1
2019.02	FAAS	1882	131.63	51	12	12	0	0
2019.02	ICP-MS	1884.15	99.27	52	9	8	1	0
2019.02	Others	1563.71	0	1	1	0	0	1
2019.02	Global	1881.12	119.73	134	29	28	1	0
2019.03	Colorimetry	1382.2	95.75	22	6	6	0	0
2019.03	ETAAS	1484.58	190.83	4	1	0	0	1
2019.03	FAAS	1402.07	85.12	48	11	10	1	0
2019.03	ICP-MS	1402	109.89	54	9	8	1	0
2019.03	Others	1327.62	0	1	1	0	0	1
2019.03	Global	1399	103.97	134	28	26	2	0
2019.04	Colorimetry	524.87	102.8	22	6	6	0	0
2019.04	ETAAS	618.03	110.47	4	1	0	0	1
2019.04	FAAS	581.03	63.2	48	11	10	1	0
2019.04	ICP-MS	590.78	46.65	54	9	8	1	0
2019.04	Others	884.21	0	1	1	0	0	1
2019.04	Global	582.06	67.5	134	28	24	4	0
2019.05	Colorimetry	1290.42	92.11	21	6	6	0	0
2019.05	FAAS	1316.77	84.38	48	11	10	1	0
2019.05	ICP-MS	1311.29	53.47	52	8	7	1	0
2019.06	Colorimetry	1908.41	141.48	21	6	6	0	0
2019.06	FAAS	1927.5	124	48	11	11	0	0
2019.06	ICP-MS	1971.62	100.1	52	8	8	0	0
2019.07	Colorimetry	771.72	86.78	21	6	6	0	0
2019.07	ETAAS	797.88	18.68	5	1	0	0	1
2019.07	FAAS	740	57.24	49	12	12	0	0
2019.07	ICP-MS	739.67	53.25	53	9	8	1	0
2019.07	Others	985.58	0	1	1	0	0	1
2019.07	Global	745.13	61.45	134	29	28	1	0
2019.08	Colorimetry	1191	108.36	21	6	6	0	0
2019.08	ETAAS	1183.74	76.21	5	1	0	0	1
2019.08	FAAS	1220	95.39	48	12	11	1	0
2019.08	ICP-MS	1210	57.55	53	9	8	1	0
2019.08	Others	1338.08	0	1	1	0	0	1
2019.08	Global	1210.8	87.27	133	29	27	2	0
2019.09	Colorimetry	1702.2	189.86	20	5	5	0	0
2019.09	ETAAS	1730	97.38	5	1	0	0	1
2019.09	FAAS	1769.5	98.59	48	11	11	0	0
2019.09	ICP-MS	1784	101.32	55	9	9	0	0
2019.09	Others	1638.92	0	1	1	0	0	1
2019.09	Global	1765.8	110.16	133	27	27	0	0
2019.10	Colorimetry	1586.5	170.54	20	5	5	0	0
2019.10	ETAAS	1556.52	84.51	5	1	0	0	1
2019.10	FAAS	1587.11	114.07	48	11	11	0	0
2019.10	ICP-MS	1591.26	72.26	55	9	8	1	0
2019.10	Others	1514.01	0	1	1	0	0	1
2019.10	Global	1590	108.11	133	27	27	0	0
2019.11	Colorimetry	1040	155.14	21	6	6	0	0
2019.11	ETAAS	1072.56	140.6	5	1	0	0	1
2019.11	FAAS	1030	80.52	45	10	10	0	0
2019.11	ICP-MS	1052.94	65.83	55	10	9	1	0
2019.11	Others	1238.68	0	1	1	0	0	1
2019.11	Global	1039.93	78.56	132	28	25	3	0
2019.12	Colorimetry	1134	102	21	6	6	0	0

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.12	ETAAS	1183.74	150.29	5	1	0	0	1
2019.12	FAAS	1124.88	81.93	45	10	10	0	0
2019.12	ICP-MS	1124.88	62.63	55	10	9	1	0
2019.12	Others	1121.61	0	1	1	0	0	1
2019.12	Global	1124.88	77.26	132	28	27	1	0
2019.13	Colorimetry	1837.74	114.75	22	6	6	0	0
2019.13	FAAS	1901.18	112.01	47	11	11	0	0
2019.13	ICP-MS	1871.75	114.78	52	10	10	0	0
2019.13	Others	1729.83	0	1	1	0	0	1
2019.13	Global	1863.91	125.23	130	28	28	0	0
2019.14	Colorimetry	1378.5	100.74	22	6	6	0	0
2019.14	FAAS	1421	99.56	47	11	11	0	0
2019.14	ICP-MS	1403.38	82.78	52	10	9	1	0
2019.14	Others	1326.97	0	1	1	0	0	1
2019.14	Global	1406.42	101.01	130	28	28	0	0
2019.15	Colorimetry	440	57.39	21	5	5	0	0
2019.15	ETAAS	444.72	46	4	1	0	0	1
2019.15	FAAS	442.13	66.15	48	12	12	0	0
2019.15	ICP-MS	442.45	39.62	53	9	9	0	0
2019.15	Others	882.25	0	1	1	0	0	1
2019.15	Global	442.23	53.87	132	28	27	1	0
2019.16	Colorimetry	1108	169.68	21	5	5	0	0
2019.16	ETAAS	1164.12	68.63	4	1	0	0	1
2019.16	FAAS	1105.26	123.51	47	12	12	0	0
2019.16	ICP-MS	1122.98	68.55	54	9	8	1	0
2019.16	Others	1259.6	0	1	1	0	0	1
2019.16	Global	1117.19	97.98	132	28	27	1	0
2019.17	Colorimetry	1863.9	111.51	21	5	4	1	0
2019.17	ETAAS	1955.46	174.27	5	1	0	0	1
2019.17	FAAS	1942	196.07	45	12	12	0	0
2019.17	ICP-MS	1974.43	119.37	55	9	9	0	0
2019.17	Others	1958.73	0	1	1	0	0	1
2019.17	Global	1926.5	147.09	132	28	28	0	0
2019.18	Colorimetry	1536.9	79.32	21	5	4	1	0
2019.18	ETAAS	1602.3	190.81	5	1	0	0	1
2019.18	FAAS	1553.26	154.51	44	12	12	0	0
2019.18	ICP-MS	1600	114.88	55	9	9	0	0
2019.18	Others	1469.54	0	1	1	0	0	1
2019.18	Global	1576.14	138.02	131	28	28	0	0
2019.19	Colorimetry	562.44	63.03	21	5	5	0	0
2019.19	ETAAS	601.68	77.57	5	1	0	0	1
2019.19	FAAS	580	70.79	47	12	12	0	0
2019.19	ICP-MS	588.6	63.32	54	10	10	0	0
2019.19	Others	880.94	0	1	1	0	0	1
2019.19	Global	588.6	66.87	133	29	28	1	0
2019.20	Colorimetry	1234.13	125.37	21	5	5	0	0
2019.20	ETAAS	1242.6	39.99	5	1	0	0	1
2019.20	FAAS	1203.45	102.37	48	12	12	0	0
2019.20	ICP-MS	1225.27	78.61	54	10	10	0	0
2019.20	Others	1221.02	0	1	1	0	0	1
2019.20	Global	1222.74	85.25	134	29	29	0	0
2019.21	Colorimetry	1016	127.5	21	5	5	0	0
2019.21	ETAAS	1092.18	48.48	5	1	0	0	1
2019.21	FAAS	1028.39	81.39	48	12	12	0	0
2019.21	ICP-MS	1034.9	52.7	56	10	10	0	0
2019.21	Others	1139.92	0	1	1	0	0	1
2019.21	Global	1032.99	74.69	136	29	29	0	0
2019.22	Colorimetry	1308	167.5	21	5	5	0	0
2019.22	ETAAS	1386.48	96.96	5	1	0	0	1
2019.22	FAAS	1301.46	106.67	47	12	12	0	0
2019.22	ICP-MS	1310.83	77.07	56	10	10	0	0
2019.22	Others	1340.05	0	1	1	0	0	1
2019.22	Global	1308	91.75	135	29	29	0	0

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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.23	Colorimetry	1740	213.32	21	5	5	0	0
2019.23	ETAAS	1700.4	211.02	5	1	0	0	1
2019.23	FAAS	1751.36	128.62	48	12	12	0	0
2019.23	ICP-MS	1782.54	77.92	52	9	9	0	0
2019.23	Others	1710.21	0	1	1	0	0	1
2019.23	Global	1765.9	116.34	132	28	28	0	0
2019.24	Colorimetry	1640	189.08	21	5	5	0	0
2019.24	ETAAS	1569.6	158.82	5	1	0	0	1
2019.24	FAAS	1650.04	139.69	48	12	12	0	0
2019.24	ICP-MS	1703.67	92.77	52	9	8	1	0
2019.24	Others	1701.05	0	1	1	0	0	1
2019.24	Global	1675.42	145.88	132	28	27	1	0



3 TRACE ELEMENTS IN BLOOD

3.1 PARTICIPATION

15 laboratories participated to the EQA for blood matrix.

Parameter	N labs	Recorded results	Expected number of results	percentage
As	4	96	96	100 %
Cd	11	233	264	88.26 %
Co	5	120	120	100 %
Cr	5	120	120	100 %
Hg	7	161	168	95.83 %
Mg	2	48	48	100 %
Mn	8	170	192	88.54 %
Pb	15	350	360	97.22 %
Se	3	72	72	100 %
Tl	5	120	120	100 %
Zn	2	48	48	100 %
Total		1538	1608	95.65

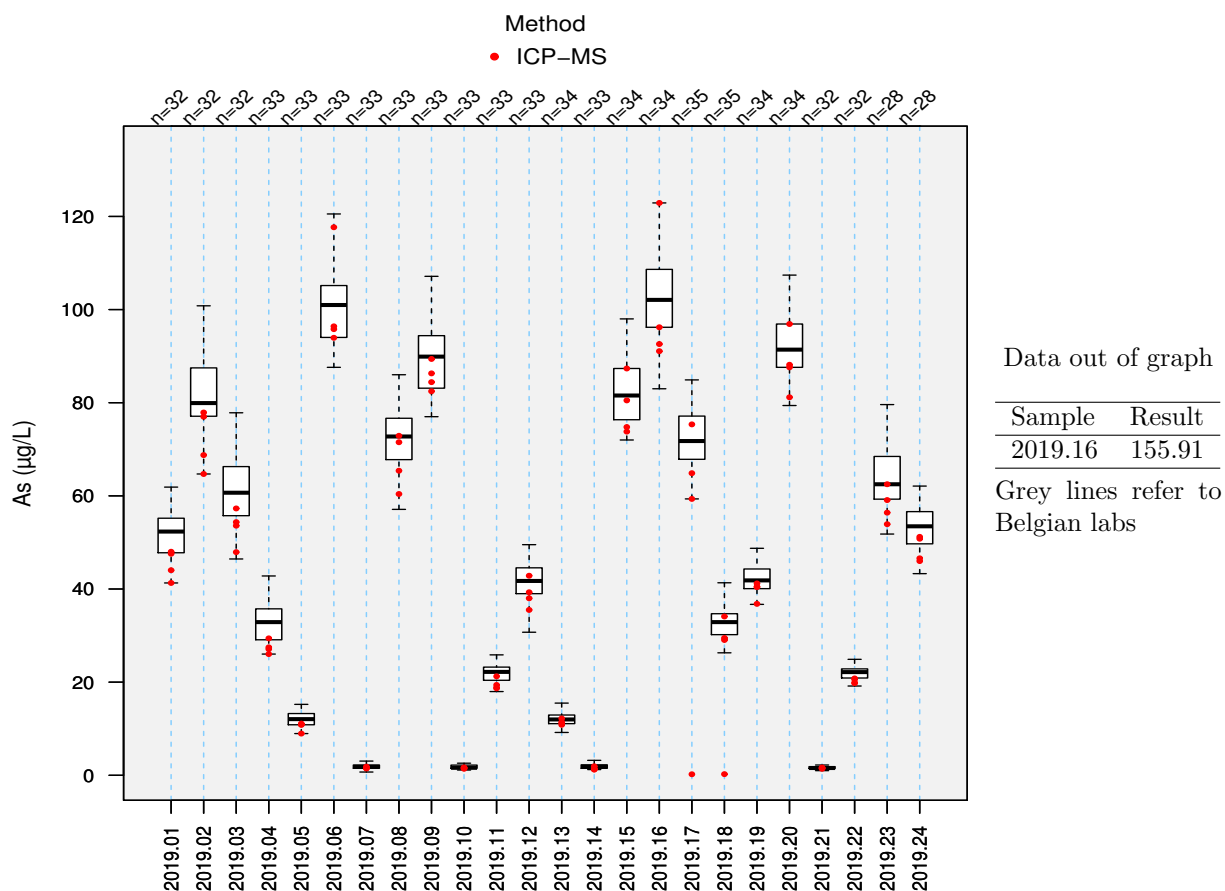
3.2 GLOBAL RESULTS

STAT	Element	Total number of results	Number of evaluated results	Number of Z citations	% citations
MA	As	96	96	2	2.08
MA	Cd	233	233	23	9.87
MA	Co	120	120	3	2.5
MA	Cr	120	120	4	3.33
MA	Hg	161	161	12	7.45
MA	Mg	48	24	1	4.17
MA+GA	Mg	48	48 (+24)	3 (+2)	6.25
MA	Mn	170	170	7	4.12
MA	Pb	350	326	23	7.06
MA+GA	Pb	350	350 (+24)	27 (+4)	7.71
MA	Se	72	72	1	1.39
MA	Tl	120	120	8	6.67
MA	Zn	48	48	2	4.17
Total	MA+GA	1538	1538	92	5.98
	MA	1538	1490	86	5.77

3.3 RESULTS PER ELEMENT

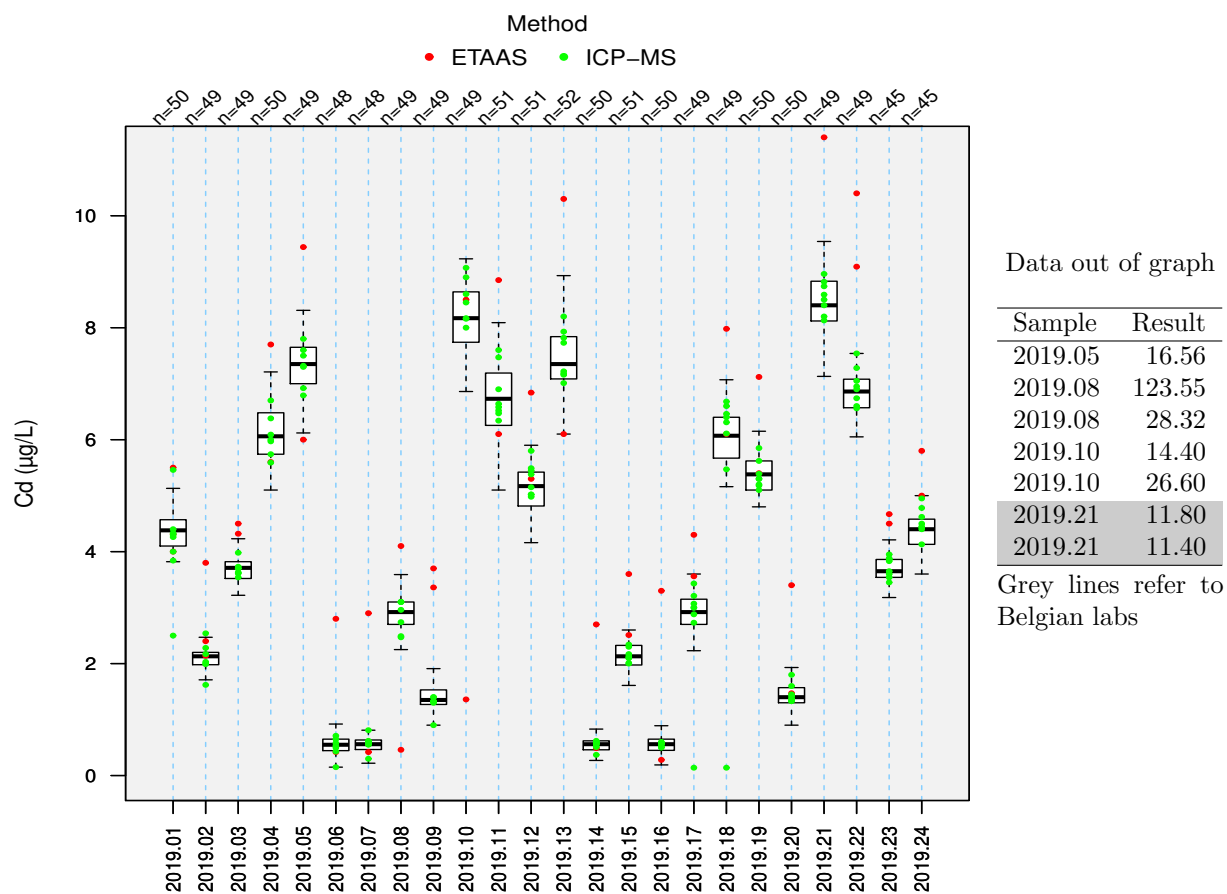
3.3.1 As

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	52.07	5.5	31	4	4	0	0
2019.02	ICP-MS	78.94	7.69	31	4	4	0	0
2019.03	ICP-MS	61.28	7.47	31	4	4	0	0
2019.04	ICP-MS	32.8	5.05	32	4	4	0	0
2019.05	ICP-MS	12.08	1.84	32	4	4	0	0
2019.06	ICP-MS	100.28	9.04	32	4	4	0	0
2019.07	ICP-MS	1.84	0.54	32	4	4	0	0
2019.08	ICP-MS	72.62	6.94	32	4	4	0	0
2019.09	ICP-MS	90.28	8.63	32	4	4	0	0
2019.10	ICP-MS	1.64	0.52	32	4	4	0	0
2019.11	ICP-MS	22.3	2.05	32	4	4	0	0
2019.12	ICP-MS	41.47	4.34	32	4	4	0	0
2019.13	ICP-MS	11.99	1.37	33	4	4	0	0
2019.14	ICP-MS	1.84	0.58	32	4	4	0	0
2019.15	ICP-MS	81.44	8.15	33	4	4	0	0
2019.16	ICP-MS	103.02	9.21	33	4	4	0	0
2019.17	ICP-MS	72.22	7.03	34	4	3	1	0
2019.18	ICP-MS	32.66	2.98	34	4	3	1	0
2019.19	ICP-MS	41.93	3.05	33	4	4	0	0
2019.20	ICP-MS	91.4	6.89	33	4	4	0	0
2019.21	ICP-MS	1.57	0.27	31	4	4	0	0
2019.22	ICP-MS	22.16	1.23	31	4	4	0	0
2019.23	ICP-MS	62.5	6.61	27	4	4	0	0
2019.24	ICP-MS	53.33	5.13	27	4	4	0	0



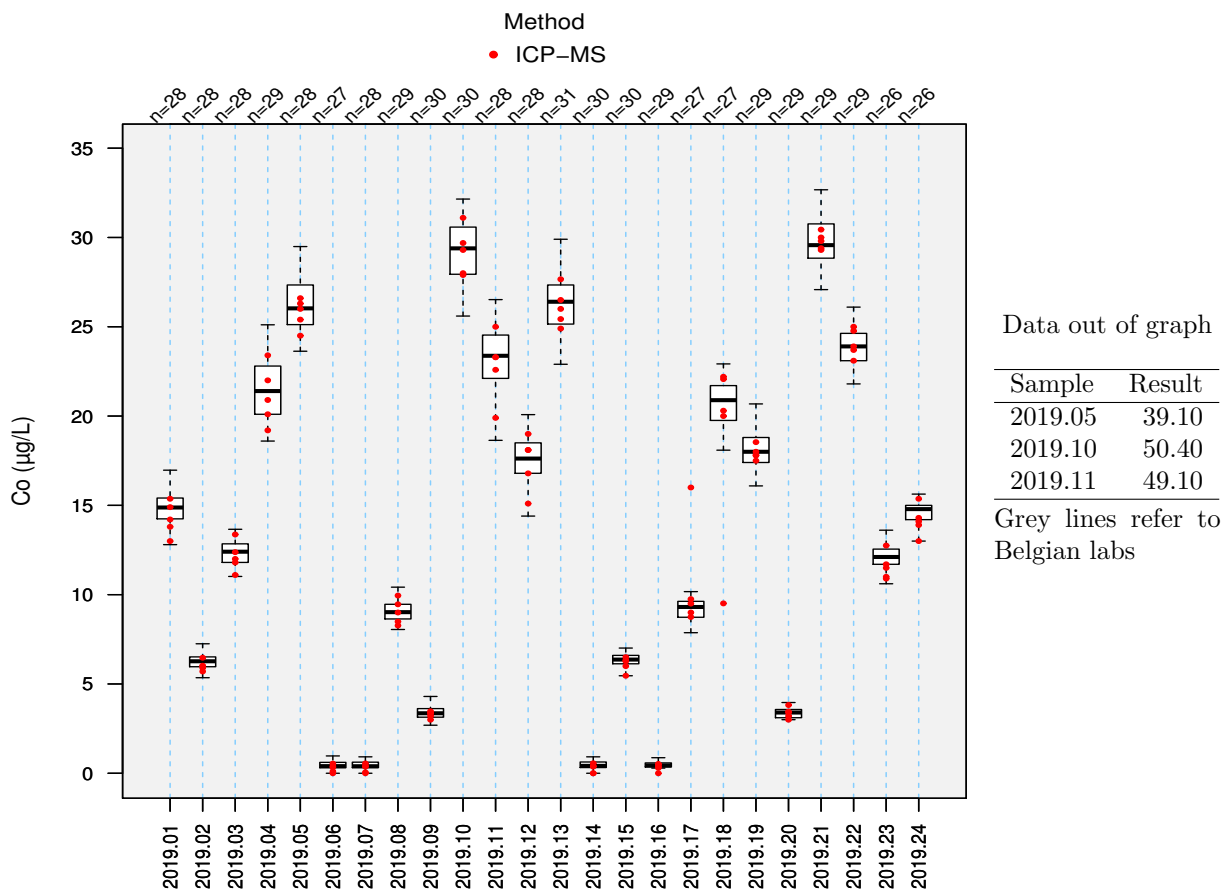
3.3.2 Cd

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	4.25	0.23	8	3	2	1	0
2019.01	ICP-MS	4.39	0.37	42	8	7	1	0
2019.02	ETAAS	2.11	0.27	8	3	2	1	0
2019.02	ICP-MS	2.13	0.16	41	7	6	1	0
2019.03	ETAAS	3.56	0.35	8	2	2	0	0
2019.03	ICP-MS	3.71	0.18	41	7	7	0	0
2019.04	ETAAS	5.8	0.47	8	2	1	1	0
2019.04	ICP-MS	6.13	0.5	42	7	7	0	0
2019.05	ETAAS	7.33	0.33	9	2	0	2	0
2019.05	ICP-MS	7.38	0.49	40	7	7	0	0
2019.06	ETAAS	0.42	0.19	9	2	1	1	0
2019.06	ICP-MS	0.56	0.14	39	7	7	0	0
2019.07	ETAAS	0.52	0.2	8	2	1	1	0
2019.07	ICP-MS	0.56	0.07	40	7	5	2	0
2019.08	ETAAS	2.44	0.27	8	2	0	2	0
2019.08	ICP-MS	2.92	0.27	41	7	7	0	0
2019.09	ETAAS	1.37	0.84	8	2	2	0	0
2019.09	ICP-MS	1.35	0.19	41	7	7	0	0
2019.10	ETAAS	7.79	0.97	8	2	1	1	0
2019.10	ICP-MS	8.21	0.58	41	7	7	0	0
2019.11	ETAAS	6.38	0.57	10	2	1	1	0
2019.11	ICP-MS	6.74	0.64	41	8	8	0	0
2019.12	ETAAS	4.93	0.69	10	2	2	0	0
2019.12	ICP-MS	5.19	0.44	41	8	8	0	0
2019.13	ETAAS	7.2	1.11	8	2	2	0	0
2019.13	ICP-MS	7.35	0.48	44	8	8	0	0
2019.14	ETAAS	0.51	0.46	8	2	1	1	0
2019.14	ICP-MS	0.56	0.1	42	8	8	0	0
2019.15	ETAAS	2.25	0.41	7	2	1	1	0
2019.15	ICP-MS	2.12	0.23	44	8	8	0	0
2019.16	ETAAS	0.42	0.34	7	2	1	1	0
2019.16	ICP-MS	0.56	0.1	43	8	8	0	0
2019.17	ETAAS	2.7	0.59	7	2	2	0	0
2019.17	ICP-MS	2.95	0.28	42	8	7	1	0
2019.18	ETAAS	5.96	0.44	7	2	1	1	0
2019.18	ICP-MS	6.08	0.52	42	8	7	1	0
2019.19	ETAAS	5.55	0.31	6	2	1	1	0
2019.19	ICP-MS	5.35	0.39	44	8	8	0	0
2019.20	ETAAS	1.41	0.41	6	2	1	1	0
2019.20	ICP-MS	1.4	0.2	44	8	8	0	0
2019.21	ETAAS	8.6	1.65	7	2	2	0	0
2019.21	ICP-MS	8.39	0.51	42	8	8	0	0
2019.22	ETAAS	7	1.35	7	2	2	0	0
2019.22	ICP-MS	6.86	0.37	42	8	8	0	0
2019.23	ETAAS	3.3	0.6	7	2	2	0	0
2019.23	ICP-MS	3.67	0.23	38	8	8	0	0
2019.24	ETAAS	4.3	0.57	7	2	2	0	0
2019.24	ICP-MS	4.4	0.21	38	8	8	0	0



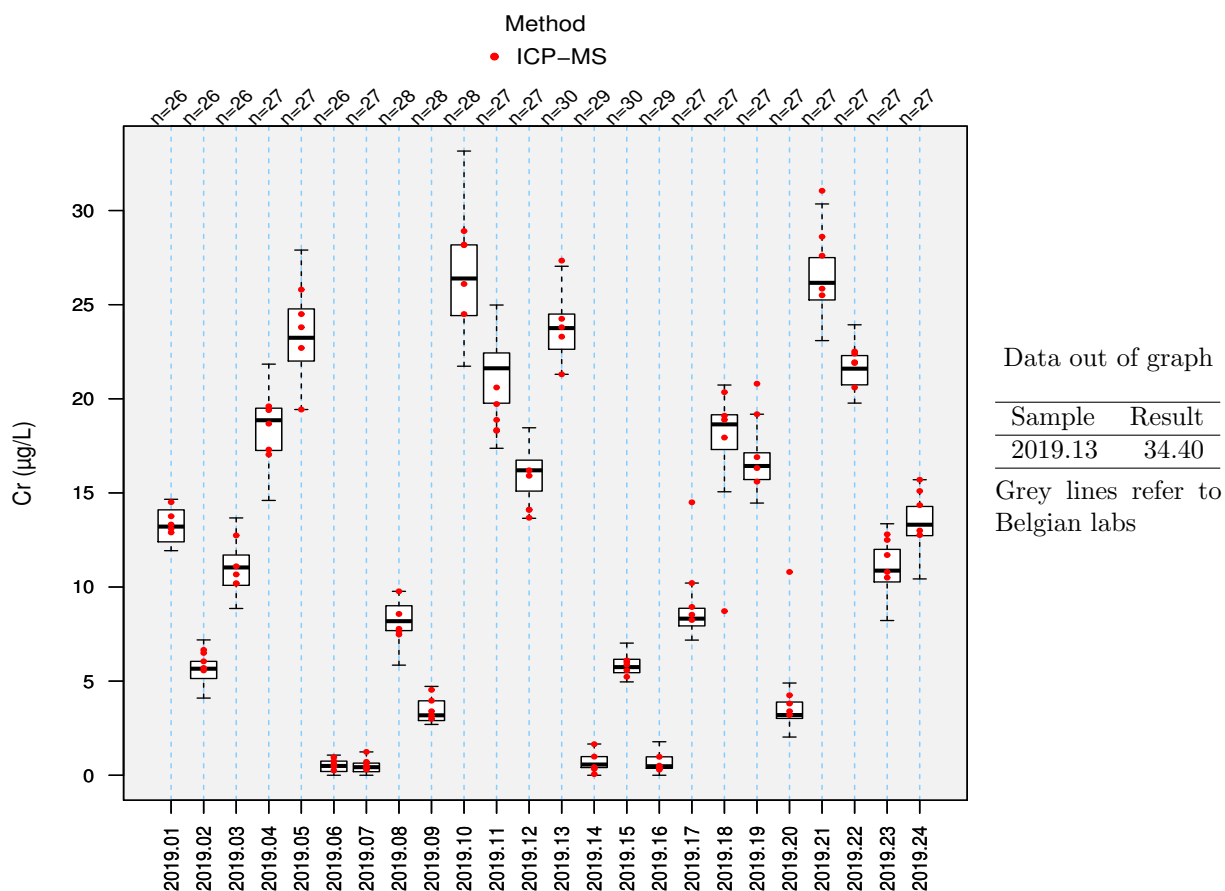
3.3.3 Co

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	14.91	0.75	26	5	5	0	0
2019.02	ICP-MS	6.27	0.38	26	5	5	0	0
2019.03	ICP-MS	12.41	0.73	26	5	5	0	0
2019.04	ICP-MS	21.72	1.77	27	5	5	0	0
2019.05	ICP-MS	26.03	1.56	26	5	5	0	0
2019.06	ICP-MS	0.39	0.2	25	5	5	0	0
2019.07	ICP-MS	0.38	0.2	26	5	5	0	0
2019.08	ICP-MS	9.04	0.58	27	5	5	0	0
2019.09	ICP-MS	3.32	0.29	28	5	5	0	0
2019.10	ICP-MS	29.41	1.93	28	5	5	0	0
2019.11	ICP-MS	23.48	1.64	26	5	5	0	0
2019.12	ICP-MS	17.73	1.19	26	5	5	0	0
2019.13	ICP-MS	26.5	1.46	29	5	5	0	0
2019.14	ICP-MS	0.41	0.19	28	5	5	0	0
2019.15	ICP-MS	6.37	0.35	29	5	5	0	0
2019.16	ICP-MS	0.44	0.16	28	5	5	0	0
2019.17	ICP-MS	9.34	0.69	26	5	4	1	0
2019.18	ICP-MS	21.05	1.27	26	5	4	1	0
2019.19	ICP-MS	18.09	0.99	28	5	5	0	0
2019.20	ICP-MS	3.42	0.34	28	5	5	0	0
2019.21	ICP-MS	29.63	1.42	28	5	5	0	0
2019.22	ICP-MS	23.91	1.1	28	5	5	0	0
2019.23	ICP-MS	12.08	0.58	25	5	5	0	0
2019.24	ICP-MS	14.85	0.59	25	5	4	1	0



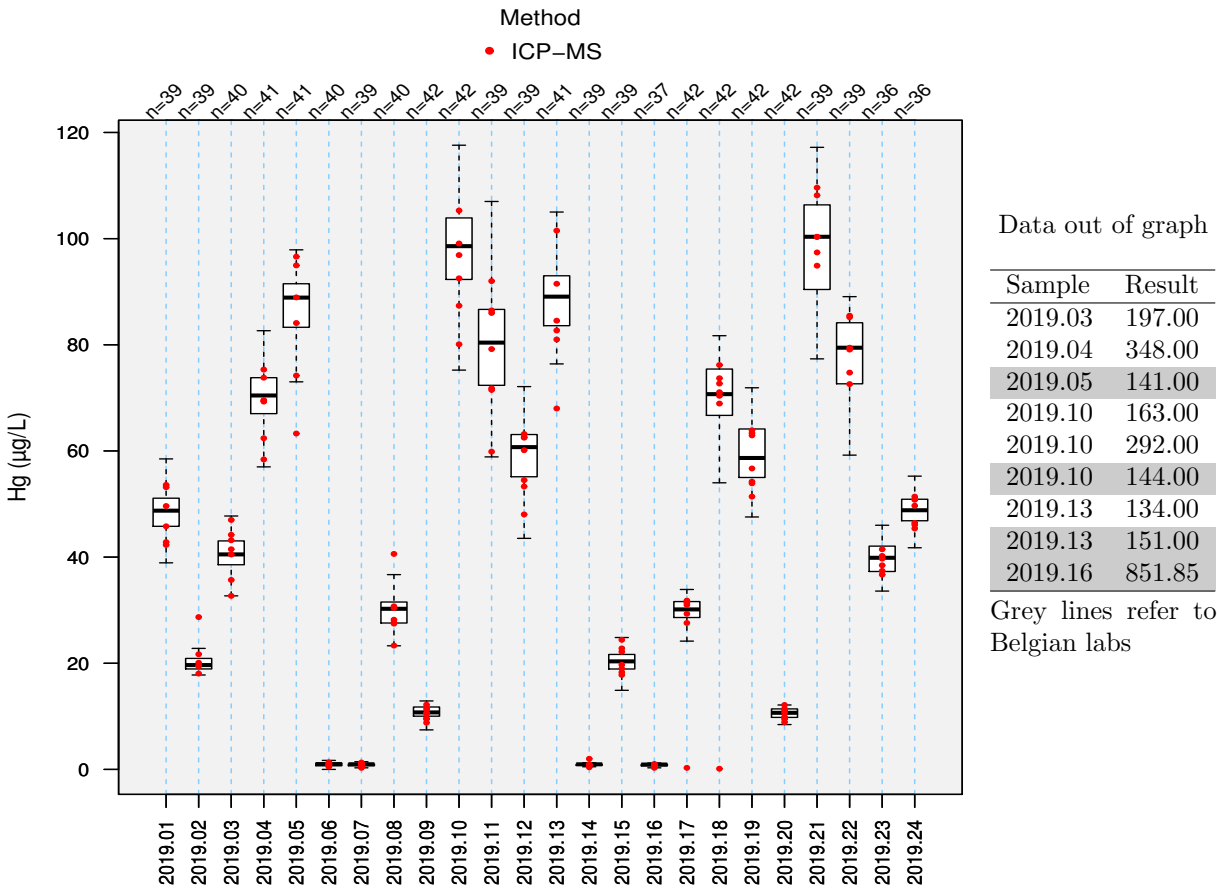
3.3.4 Cr

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	13	1.21	22	5	5	0	0
2019.02	ICP-MS	5.66	0.64	22	5	5	0	0
2019.03	ICP-MS	10.82	1.29	22	5	5	0	0
2019.04	ICP-MS	18.71	1.66	23	5	5	0	0
2019.05	ICP-MS	23.7	2.53	22	5	5	0	0
2019.06	ICP-MS	0.57	0.47	21	5	5	0	0
2019.07	ICP-MS	0.48	0.35	22	5	5	0	0
2019.08	ICP-MS	8.33	0.96	23	5	5	0	0
2019.09	ICP-MS	3.38	0.75	23	5	5	0	0
2019.10	ICP-MS	26.6	2.38	23	5	5	0	0
2019.11	ICP-MS	21.7	1.94	22	5	5	0	0
2019.12	ICP-MS	16.38	1.3	22	5	5	0	0
2019.13	ICP-MS	23.4	1.58	25	5	5	0	0
2019.14	ICP-MS	0.54	0.39	24	5	5	0	0
2019.15	ICP-MS	5.87	0.63	25	5	5	0	0
2019.16	ICP-MS	0.49	0.48	24	5	5	0	0
2019.17	ICP-MS	8.39	0.75	24	5	4	1	0
2019.18	ICP-MS	18.7	1.31	24	5	4	1	0
2019.19	ICP-MS	16.41	1.26	24	5	4	1	0
2019.20	ICP-MS	3.21	0.69	24	5	4	1	0
2019.21	ICP-MS	26.73	1.75	23	5	5	0	0
2019.22	ICP-MS	21.6	1.16	23	5	5	0	0
2019.23	ICP-MS	10.89	1.42	22	5	5	0	0
2019.24	ICP-MS	13.64	1.57	22	5	5	0	0



3.3.5 Hg

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	48.55	4.17	38	6	6	0	0
2019.02	ICP-MS	19.73	1.62	38	6	5	1	0
2019.03	ICP-MS	40.52	3.33	39	7	7	0	0
2019.04	ICP-MS	70.53	5.18	40	7	7	0	0
2019.05	ICP-MS	88.93	5.75	39	7	5	2	0
2019.06	ICP-MS	1.03	0.36	38	7	7	0	0
2019.07	ICP-MS	0.96	0.27	38	7	7	0	0
2019.08	ICP-MS	30.4	2.73	39	7	6	1	0
2019.09	ICP-MS	10.8	1.23	41	7	7	0	0
2019.10	ICP-MS	99.09	8.47	41	7	6	1	0
2019.11	ICP-MS	80.7	10.77	38	7	7	0	0
2019.12	ICP-MS	60.89	6.17	38	7	7	0	0
2019.13	ICP-MS	89.27	6.76	39	7	5	2	0
2019.14	ICP-MS	0.99	0.15	37	7	5	2	0
2019.15	ICP-MS	20.31	2.06	38	7	7	0	0
2019.16	ICP-MS	0.92	0.24	36	6	5	1	0
2019.17	ICP-MS	30.09	2.22	41	7	6	1	0
2019.18	ICP-MS	70.39	6.47	41	7	6	1	0
2019.19	ICP-MS	59.38	6.78	41	7	7	0	0
2019.20	ICP-MS	10.63	1.19	41	7	7	0	0
2019.21	ICP-MS	100.92	11.26	38	6	6	0	0
2019.22	ICP-MS	79.62	8.77	38	6	6	0	0
2019.23	ICP-MS	39.87	3.47	36	6	6	0	0
2019.24	ICP-MS	48.83	2.92	36	6	6	0	0

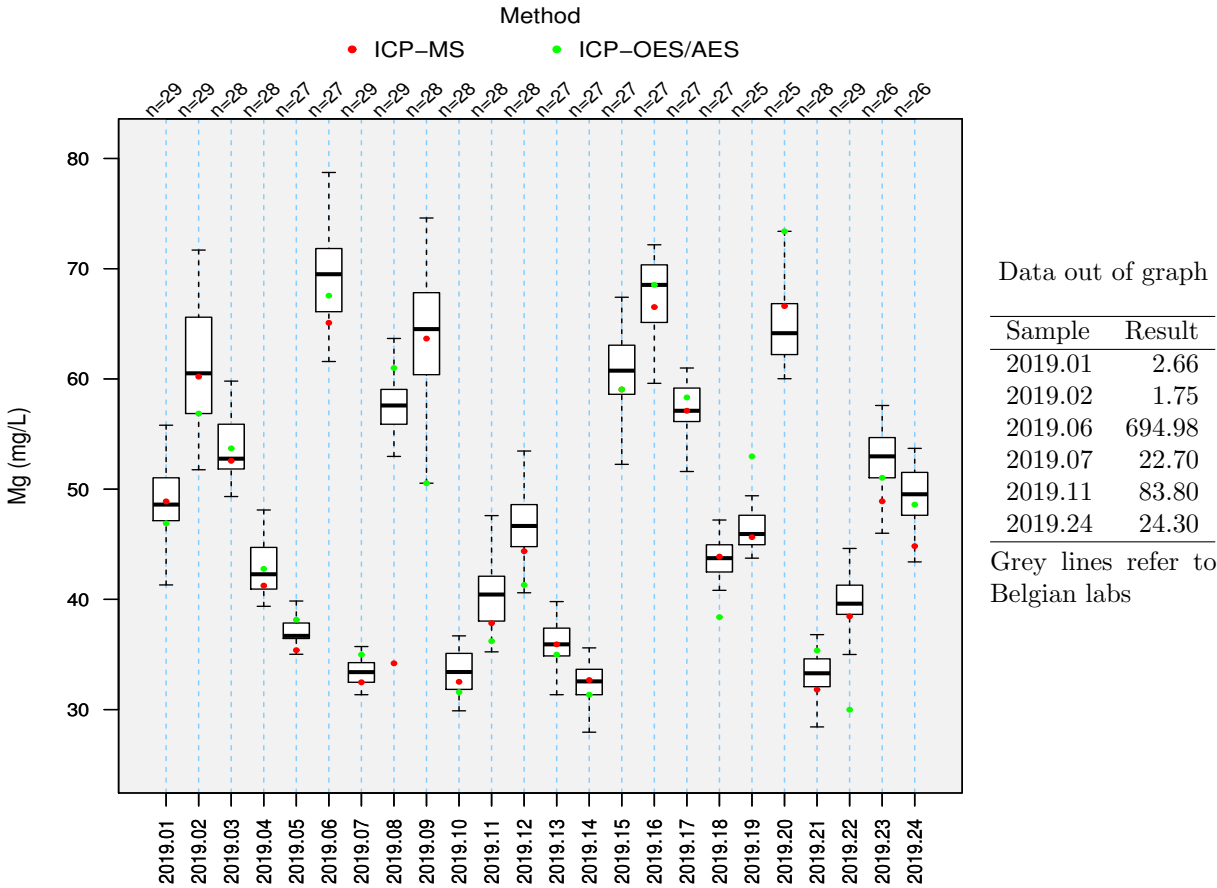


3.3.6 Mg

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	49.72	2.57	16	1	1	0	0
2019.01	ICP-OES/AES	46.9	0	1	1	0	0	1
2019.01	Global	48.6	2.88	29	2	2	0	0
2019.02	ICP-MS	60.73	4.64	16	1	1	0	0
2019.02	ICP-OES/AES	56.86	0	1	1	0	0	1
2019.02	Global	60.51	6.48	29	2	2	0	0
2019.03	ICP-MS	52.53	2.85	16	1	1	0	0
2019.03	ICP-OES/AES	53.7	0	1	1	0	0	1
2019.03	Global	52.77	2.8	28	2	2	0	0
2019.04	ICP-MS	42.16	2.56	16	1	1	0	0
2019.04	ICP-OES/AES	42.77	0	1	1	0	0	1
2019.04	Global	42.28	2.57	28	2	2	0	0
2019.05	ICP-MS	36.45	0.95	16	1	1	0	0
2019.05	ICP-OES/AES	38.15	0	1	1	0	0	1
2019.05	Global	36.69	1.04	27	2	2	0	0
2019.06	ICP-MS	69.26	3.77	16	1	1	0	0
2019.06	ICP-OES/AES	67.55	0	1	1	0	0	1
2019.06	Global	69.5	4.25	27	2	2	0	0
2019.07	ICP-MS	33.05	1.44	17	1	1	0	0
2019.07	ICP-OES/AES	34.99	0	1	1	0	0	1
2019.07	Global	33.4	1.32	29	2	2	0	0
2019.08	ICP-MS	57.59	3.11	17	1	0	1	0
2019.08	ICP-OES/AES	60.99	0	1	1	0	0	1
2019.08	Global	57.59	2.34	29	2	1	1	0
2019.09	ICP-MS	65	5.84	16	1	1	0	0
2019.09	ICP-OES/AES	50.54	0	1	1	0	0	1
2019.09	Global	64.52	5.28	28	2	2	0	0
2019.10	ICP-MS	33.89	2.98	16	1	1	0	0
2019.10	ICP-OES/AES	31.59	0	1	1	0	0	1
2019.10	Global	33.41	2.29	28	2	2	0	0
2019.11	ICP-MS	40.1	2.88	17	1	1	0	0
2019.11	ICP-OES/AES	36.21	0	1	1	0	0	1
2019.11	Global	40.44	2.86	28	2	2	0	0
2019.12	ICP-MS	47.2	2.88	17	1	1	0	0
2019.12	ICP-OES/AES	41.31	0	1	1	0	0	1
2019.12	Global	46.66	2.67	28	2	2	0	0
2019.13	ICP-MS	36.06	2.12	16	1	1	0	0
2019.13	ICP-OES/AES	34.99	0	1	1	0	0	1
2019.13	Global	35.92	1.87	27	2	2	0	0
2019.14	ICP-MS	32.62	1.35	16	1	1	0	0
2019.14	ICP-OES/AES	31.35	0	1	1	0	0	1
2019.14	Global	32.56	1.71	27	2	2	0	0
2019.15	ICP-MS	62.2	2.02	16	1	1	0	0
2019.15	ICP-OES/AES	59.05	0	1	1	0	0	1
2019.15	Global	60.75	3.3	27	2	2	0	0
2019.16	ICP-MS	69.5	2.26	16	1	1	0	0
2019.16	ICP-OES/AES	68.53	0	1	1	0	0	1
2019.16	Global	68.53	3.87	27	2	2	0	0
2019.17	ICP-MS	57.84	2.34	16	1	1	0	0
2019.17	ICP-OES/AES	58.32	0	1	1	0	0	1
2019.17	Global	57.11	2.25	27	2	2	0	0
2019.18	ICP-MS	44.22	2.26	16	1	1	0	0
2019.18	ICP-OES/AES	38.39	0	1	1	0	0	1
2019.18	Global	43.74	1.83	27	2	2	0	0
2019.19	ICP-MS	46.9	2.49	15	1	1	0	0
2019.19	ICP-OES/AES	52.97	0	1	1	0	0	1
2019.19	Global	45.93	1.98	25	2	1	1	0
2019.20	ICP-MS	65.61	3.25	15	1	1	0	0
2019.20	ICP-OES/AES	73.39	0	1	1	0	0	1
2019.20	Global	64.15	3.42	25	2	2	0	0
2019.21	ICP-MS	33.29	0.93	17	1	1	0	0

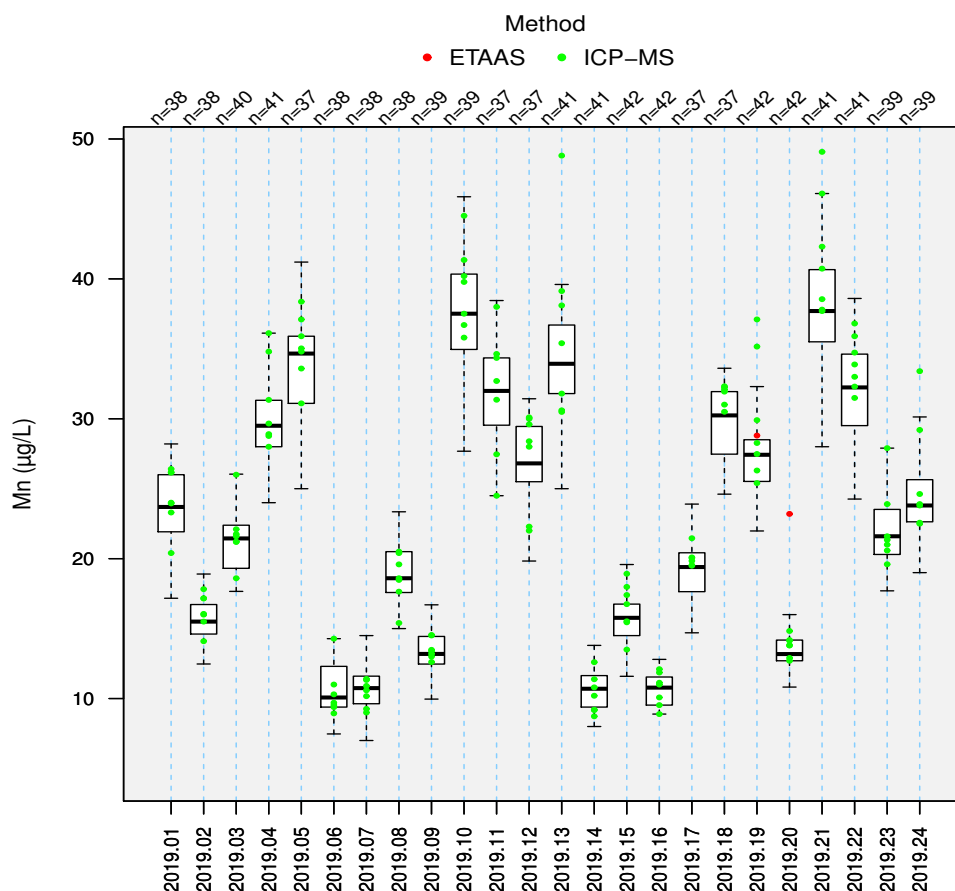
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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.21	ICP-OES/AES	35.36	0	1	1	0	0	1
2019.21	Global	33.3	1.82	28	2	2	0	0
2019.22	ICP-MS	40.58	1.8	17	1	1	0	0
2019.22	ICP-OES/AES	29.99	0	1	1	0	0	1
2019.22	Global	39.61	1.96	29	2	1	1	0
2019.23	ICP-MS	53.46	2.56	15	1	1	0	0
2019.23	ICP-OES/AES	51.03	0	1	1	0	0	1
2019.23	Global	52.97	2.5	26	2	2	0	0
2019.24	ICP-MS	49.82	2.43	15	1	1	0	0
2019.24	ICP-OES/AES	48.6	0	1	1	0	0	1
2019.24	Global	49.53	2.66	26	2	2	0	0



3.3.7 Mn

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	23.35	2.06	33	7	7	0	0
2019.02	ICP-MS	15.66	1.76	33	7	7	0	0
2019.03	ICP-MS	21.45	1.95	34	7	7	0	0
2019.04	ICP-MS	29.5	2.28	35	7	7	0	0
2019.05	ICP-MS	34.61	3.79	32	7	7	0	0
2019.06	ICP-MS	10.05	2.24	32	7	7	0	0
2019.07	ICP-MS	10.95	1.25	32	7	7	0	0
2019.08	ICP-MS	18.7	2.29	32	7	7	0	0
2019.09	ICP-MS	13.24	1.41	33	7	7	0	0
2019.10	ICP-MS	37.51	3.47	33	7	7	0	0
2019.11	ICP-MS	32.69	3.52	31	7	7	0	0
2019.12	ICP-MS	27.25	2.92	31	7	7	0	0
2019.13	ICP-MS	33.93	3.15	35	7	6	1	0
2019.14	ICP-MS	10.44	1.72	35	7	7	0	0
2019.15	ICP-MS	15.91	1.82	36	7	7	0	0
2019.16	ICP-MS	10.8	1.55	36	7	7	0	0
2019.17	ICP-MS	19.4	1.9	31	7	6	1	0
2019.18	ICP-MS	30.25	3.17	31	7	6	1	0
2019.19	ETAAS	26.7	3.13	7	1	1	0	0
2019.19	ICP-MS	27.43	1.83	35	7	5	2	0
2019.20	ETAAS	12.53	1.11	7	1	0	1	0
2019.20	ICP-MS	13.29	1.08	35	7	7	0	0
2019.21	ICP-MS	37.68	3.83	35	7	7	0	0
2019.22	ICP-MS	32.19	3.31	35	7	7	0	0
2019.23	ICP-MS	21.34	2.74	33	7	7	0	0
2019.24	ICP-MS	23.78	2.28	33	7	6	1	0



Data out of graph

Sample	Result
2019.01	2.01
2019.02	1.37
2019.02	0.83
2019.02	1.26
2019.03	0.02
2019.04	0.03
2019.08	75.93
2019.10	84.80
2019.15	0.02
2019.16	0.01
2019.17	96.50
2019.18	93.40
2019.23	0.03

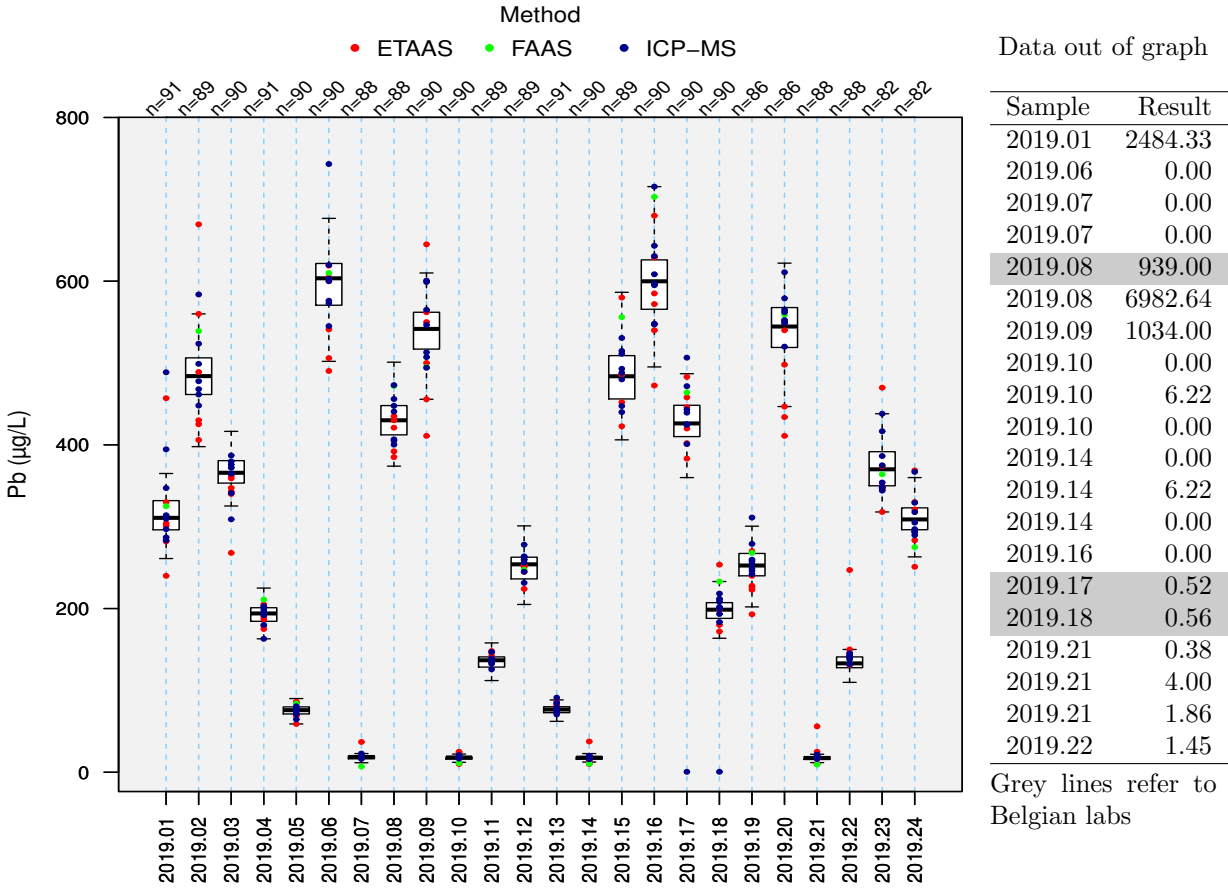
Grey lines refer to
Belgian labs

3.3.8 Pb

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ETAAS	312.35	30.33	32	6	5	1	0
2019.01	FAAS	312.87	7.95	3	1	0	0	1
2019.01	ICP-MS	309	23.81	55	8	6	2	0
2019.01	Global	310.8	26.43	91	15	12	3	0
2019.02	ETAAS	487.75	32.3	32	6	5	1	0
2019.02	FAAS	503.5	24.68	3	1	0	0	1
2019.02	ICP-MS	477.75	36.46	53	7	7	0	0
2019.02	Global	484	33.16	89	14	12	2	0
2019.03	ETAAS	370	22.48	33	6	5	1	0
2019.03	FAAS	371.51	1.55	3	1	0	0	1
2019.03	ICP-MS	364.93	18.88	54	7	7	0	0
2019.03	Global	365.87	19.96	90	14	13	1	0
2019.04	ETAAS	196	16.2	33	6	6	0	0
2019.04	FAAS	192.49	12.16	3	1	0	0	1
2019.04	ICP-MS	192	11.15	55	7	7	0	0
2019.04	Global	194	12.29	91	14	14	0	0
2019.05	ETAAS	75.6	6.67	33	6	6	0	0
2019.05	FAAS	69.03	15.55	4	1	0	0	1
2019.05	ICP-MS	76.66	5.54	53	7	7	0	0
2019.05	Global	75.85	6.37	90	14	14	0	0
2019.06	ETAAS	601	39.81	33	6	6	0	0
2019.06	FAAS	607.51	15.14	4	1	0	0	1
2019.06	ICP-MS	603	41.51	53	7	6	1	0
2019.06	Global	603.5	37.36	90	14	12	2	0
2019.07	ETAAS	18.88	5	32	6	5	1	0
2019.07	FAAS	6.94	6.91	3	1	0	0	1
2019.07	ICP-MS	18.65	1.48	53	7	7	0	0
2019.07	Global	18.65	2.63	88	14	12	2	0
2019.08	ETAAS	428.2	16.92	32	6	5	1	0
2019.08	FAAS	437.19	16.74	3	1	0	0	1
2019.08	ICP-MS	435.12	28.63	53	7	7	0	0
2019.08	Global	430	26.34	88	14	13	1	0
2019.09	ETAAS	540.79	33.36	31	6	4	2	0
2019.09	FAAS	528.89	21.73	4	1	0	0	1
2019.09	ICP-MS	544	31.5	55	7	7	0	0
2019.09	Global	541.64	33.21	90	14	12	2	0
2019.10	ETAAS	17	4.04	31	6	6	0	0
2019.10	FAAS	11.71	4.26	4	1	0	0	1
2019.10	ICP-MS	18.23	1.24	55	7	7	0	0
2019.10	Global	18.05	2	90	14	10	4	0
2019.11	ETAAS	139.62	8.1	34	6	6	0	0
2019.11	FAAS	136.81	4.61	3	1	0	0	1
2019.11	ICP-MS	135.7	9.64	52	8	8	0	0
2019.11	Global	136.81	9.22	89	15	15	0	0
2019.12	ETAAS	254.12	16.66	34	6	6	0	0
2019.12	FAAS	247.33	9.99	3	1	0	0	1
2019.12	ICP-MS	254.43	20.11	52	8	8	0	0
2019.12	Global	254	19.66	89	15	15	0	0
2019.13	ETAAS	78	4.31	33	6	6	0	0
2019.13	FAAS	75.5	2.29	3	1	0	0	1
2019.13	ICP-MS	75.9	5.01	55	8	7	1	0
2019.13	Global	76.6	5.37	91	15	15	0	0
2019.14	ETAAS	18.4	5.93	33	6	5	1	0
2019.14	FAAS	10.4	5.89	3	1	0	0	1
2019.14	ICP-MS	17.82	1.51	54	8	8	0	0
2019.14	Global	17.82	2.13	90	15	12	3	0
2019.15	ETAAS	483.29	22.8	32	5	4	1	0
2019.15	FAAS	529.75	19.46	2	1	0	0	1
2019.15	ICP-MS	483	41.55	55	8	8	0	0
2019.15	Global	483.8	39.21	89	14	14	0	0
2019.16	ETAAS	600.88	40.48	33	6	5	1	0

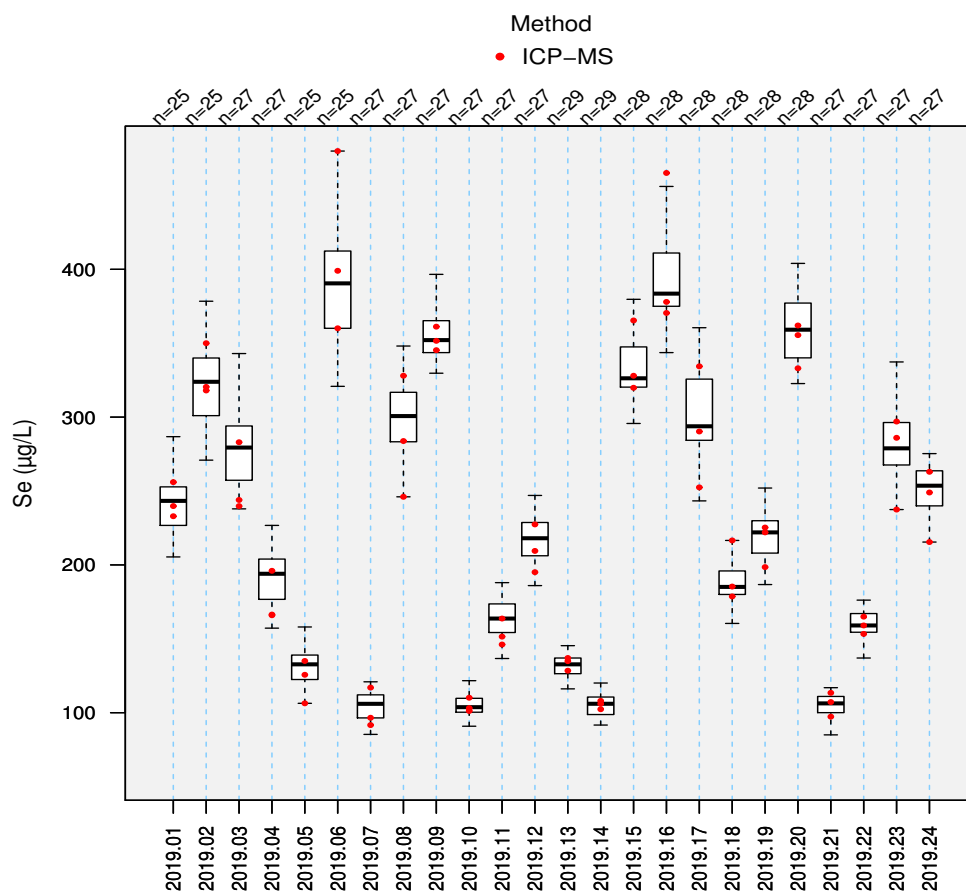
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Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.16	FAAS	659.19	32.48	2	1	0	0	1
2019.16	ICP-MS	598	53.31	55	8	8	0	0
2019.16	Global	599.85	44.33	90	15	15	0	0
2019.17	ETAAS	433.68	25.14	30	6	6	0	0
2019.17	FAAS	440.24	41.7	4	1	0	0	1
2019.17	ICP-MS	425.06	26.97	56	8	6	2	0
2019.17	Global	426.18	27.67	90	15	14	1	0
2019.18	ETAAS	198.95	10.41	30	6	5	1	0
2019.18	FAAS	215.43	26.35	4	1	0	0	1
2019.18	ICP-MS	196.37	16.29	56	8	7	1	0
2019.18	Global	198.6	13.96	90	15	13	2	0
2019.19	ETAAS	246.57	19.2	29	6	6	0	0
2019.19	FAAS	268	0	1	1	0	0	1
2019.19	ICP-MS	253.17	17.78	56	8	7	1	0
2019.19	Global	252.56	19.91	86	15	15	0	0
2019.20	ETAAS	532.5	33.36	29	6	5	1	0
2019.20	FAAS	559	0	1	1	0	0	1
2019.20	ICP-MS	551.58	40.97	56	8	8	0	0
2019.20	Global	544.55	35.42	86	15	13	2	0
2019.21	ETAAS	17.27	4.98	32	6	5	1	0
2019.21	FAAS	12.95	2.71	2	1	0	0	1
2019.21	ICP-MS	17.51	1.53	54	8	8	0	0
2019.21	Global	17.45	2.44	88	15	11	4	0
2019.22	ETAAS	134.68	9.91	32	6	5	1	0
2019.22	FAAS	130.35	4.19	2	1	0	0	1
2019.22	ICP-MS	132.61	10.56	54	8	8	0	0
2019.22	Global	133	9.67	88	15	14	1	0
2019.23	ETAAS	374	34.77	31	6	6	0	0
2019.23	FAAS	377.81	10.23	2	1	0	0	1
2019.23	ICP-MS	368.26	26.17	49	8	8	0	0
2019.23	Global	370.11	30.1	82	15	14	1	0
2019.24	ETAAS	315	26.52	31	6	6	0	0
2019.24	FAAS	300.15	18.64	2	1	0	0	1
2019.24	ICP-MS	308.73	18.24	49	8	7	1	0
2019.24	Global	308.87	19.64	82	15	14	1	0



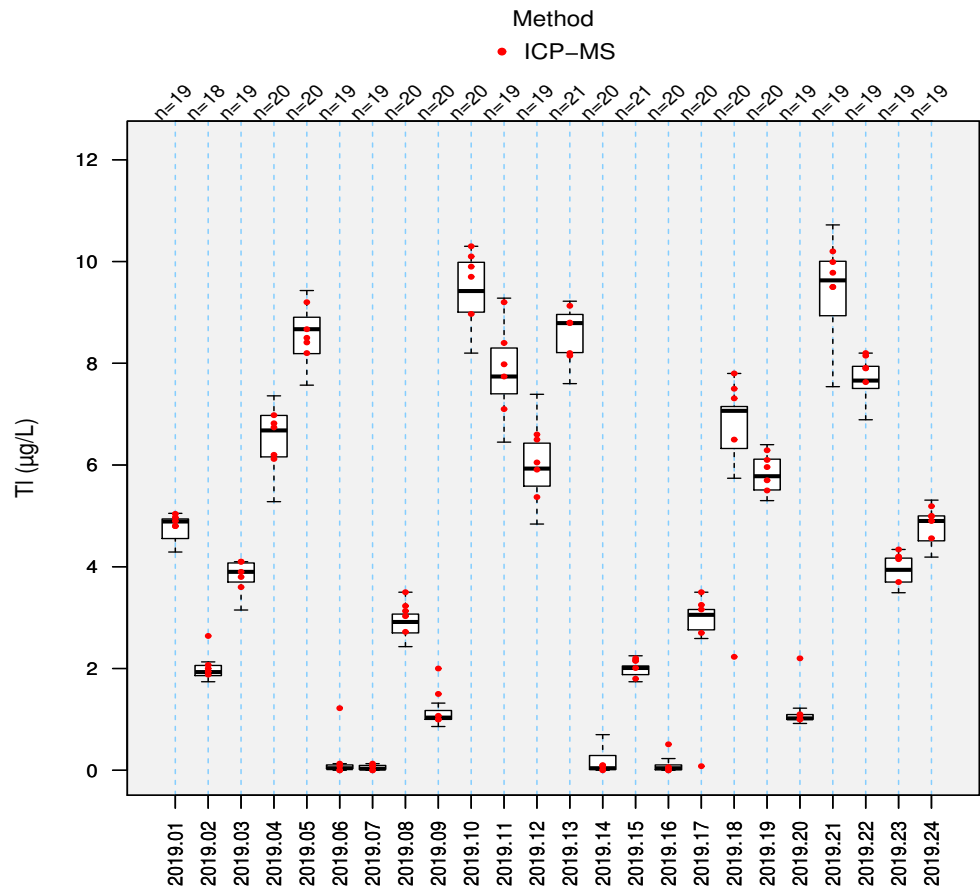
3.3.9 Se

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	243.32	20.14	23	3	3	0	0
2019.02	ICP-MS	323.9	25.38	23	3	3	0	0
2019.03	ICP-MS	279.7	27.19	24	3	3	0	0
2019.04	ICP-MS	194.17	20.94	24	3	3	0	0
2019.05	ICP-MS	133.12	13.26	22	3	3	0	0
2019.06	ICP-MS	391.84	35.63	22	3	3	0	0
2019.07	ICP-MS	106.72	11.5	24	3	3	0	0
2019.08	ICP-MS	300.85	27.59	24	3	3	0	0
2019.09	ICP-MS	351.86	17.82	24	3	3	0	0
2019.10	ICP-MS	104.8	6.44	24	3	3	0	0
2019.11	ICP-MS	164.41	13.37	24	3	3	0	0
2019.12	ICP-MS	219.22	16.4	24	3	3	0	0
2019.13	ICP-MS	133.81	8.26	26	3	3	0	0
2019.14	ICP-MS	106.34	7.26	26	3	3	0	0
2019.15	ICP-MS	327.06	16.81	25	3	3	0	0
2019.16	ICP-MS	383.94	25.26	25	3	2	1	0
2019.17	ICP-MS	295.03	28.94	26	3	3	0	0
2019.18	ICP-MS	185.11	11.61	26	3	3	0	0
2019.19	ICP-MS	222	15.96	26	3	3	0	0
2019.20	ICP-MS	363	28.04	26	3	3	0	0
2019.21	ICP-MS	106.3	7.86	25	3	3	0	0
2019.22	ICP-MS	161	9.37	25	3	3	0	0
2019.23	ICP-MS	281.24	20.47	25	3	3	0	0
2019.24	ICP-MS	258	17.4	25	3	3	0	0



3.3.10 Tl

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	4.89	0.29	19	5	5	0	0
2019.02	ICP-MS	1.93	0.14	18	5	4	1	0
2019.03	ICP-MS	3.9	0.28	19	5	5	0	0
2019.04	ICP-MS	6.68	0.59	20	5	5	0	0
2019.05	ICP-MS	8.67	0.49	20	5	5	0	0
2019.06	ICP-MS	0.04	0.06	19	5	4	1	0
2019.07	ICP-MS	0.03	0.06	19	5	5	0	0
2019.08	ICP-MS	2.92	0.27	20	5	5	0	0
2019.09	ICP-MS	1.04	0.11	20	5	3	2	0
2019.10	ICP-MS	9.42	0.7	20	5	5	0	0
2019.11	ICP-MS	7.74	0.67	19	5	5	0	0
2019.12	ICP-MS	5.93	0.63	19	5	5	0	0
2019.13	ICP-MS	8.79	0.56	21	5	5	0	0
2019.14	ICP-MS	0.04	0.17	20	5	5	0	0
2019.15	ICP-MS	2.01	0.13	21	5	5	0	0
2019.16	ICP-MS	0.04	0.05	20	5	4	1	0
2019.17	ICP-MS	3.05	0.27	20	5	4	1	0
2019.18	ICP-MS	7.06	0.55	20	5	4	1	0
2019.19	ICP-MS	5.78	0.44	20	5	5	0	0
2019.20	ICP-MS	1.02	0.07	19	5	4	1	0
2019.21	ICP-MS	9.63	0.79	19	5	5	0	0
2019.22	ICP-MS	7.66	0.32	19	5	5	0	0
2019.23	ICP-MS	3.94	0.35	19	5	5	0	0
2019.24	ICP-MS	4.9	0.36	19	5	5	0	0



3.3.11 Zn

Sample	Method	Median	SD	N	NBE	NG	NC	NE
2019.01	ICP-MS	9.85	0.56	19	2	2	0	0
2019.02	ICP-MS	12.16	0.63	19	2	2	0	0
2019.03	ICP-MS	10.6	0.87	19	2	2	0	0
2019.04	ICP-MS	8.18	0.66	19	2	2	0	0
2019.05	ICP-MS	6.43	0.54	18	2	2	0	0
2019.06	ICP-MS	13.12	1.27	18	2	1	1	0
2019.07	ICP-MS	6.02	0.41	19	2	2	0	0
2019.08	ICP-MS	11.27	0.78	19	2	1	1	0
2019.09	ICP-MS	12.8	0.7	19	2	2	0	0
2019.10	ICP-MS	5.87	0.52	19	2	2	0	0
2019.11	ICP-MS	7.37	0.46	19	2	2	0	0
2019.12	ICP-MS	8.76	0.75	19	2	2	0	0
2019.13	ICP-MS	6.72	0.47	21	2	2	0	0
2019.14	ICP-MS	6.03	0.48	21	2	2	0	0
2019.15	ICP-MS	11.79	0.62	21	2	2	0	0
2019.16	ICP-MS	13.34	1.02	21	2	2	0	0
2019.17	ICP-MS	11.09	0.59	21	2	2	0	0
2019.18	ICP-MS	8.2	0.69	21	2	2	0	0
2019.19	ICP-MS	8.82	0.29	21	2	2	0	0
2019.20	ICP-MS	12.56	0.7	21	2	2	0	0
2019.21	ICP-MS	5.9	0.2	21	2	2	0	0
2019.22	ICP-MS	7.37	0.42	21	2	2	0	0
2019.23	ICP-MS	10.41	0.58	18	2	2	0	0
2019.24	ICP-MS	9.7	0.92	18	2	2	0	0

