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**Ambient air and waste gas Determination of arsenic, selenium,  
bismuth, antimony in ambient particle matter Atomic fluorescence  
spectrometry**

本电子版发布稿，请 国环境出版集 出版的 标 本 。

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	.....	
1	.....	1
2	.....	1
3	.....	1
4	.....	2
5	.....	2
6	.....	4
7	.....	4
8	.....	6
9	.....	7
10	.....	8
11	.....	9
12	.....	9
13	.....	9
	.....	10
	.....	11

2020 05 15

2020 08 15



1 /          2+ 10 /          2+ 150 /          -          5.17  
100 /          2+ 50 /          3+  
2+

=1.19 /

3 =1.42 /

4

4 2

6 8 6

2 3

99.99%

99.99%

2 3

5+95

50          5.1          500          1

1+1

500          5.1          400          1

=1 /

41.6          5.1          500

-

55.5          5.2          166.5          5.1          500

1

4 =20 /

0.5          5.3          100          2.0

5.5

-

5.6          5.7          5          100

			=1 /			
20.0		5.4		500		
			=100 /			
			0.1320	105	2	5.8
5		5.18		5.14		
1000	4	2				
			=1.00 /			
	5.00	5.19.1		500		100
5.13		4		1		
			=100 /			
	10.00	5.19.2		100	20	5.13
		4		30		
			=100 /			
			0.1000	5.9	100	20
5.2				1000		
4	2					
			=1.00 /			
	5.00	5.20.1		500		200
5.13		4		100		
			=100 /			
	10.00	5.20.2		100	40	5.13
			=100 /			
			0.1000	5.10	100	20
5.2				1000		
4	2					
			=1.00 /			
	5.00	5.21.1		500		100
5.13		4		1		
			=100 /			
	10.00	5.21.2		100	20	5.13
			=100 /			
			0.1197	105	2	5.11

80	5.1	1000	120	5.1
	4	2		
		=1.00 /		
5.13	5.00	5.22.1	500	100
		4	1	
		=100 /		
	10.00	5.22.2	100	20
				5.13

0.3 99%

0.3 99.9%

99.99%

/ 374 93

5 / 80 / / 48

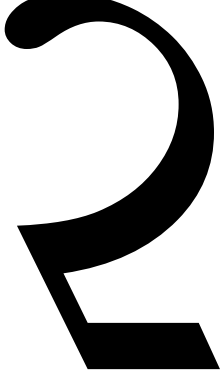
/ 21191

5

1

0.0001

664 194



/ 55

/ 16157 / 397  
0.600<sup>3</sup>

-	5.15	6.7	15.0
200		15	
50.0		10	- 5.15
		40.0 -	5.15
		100.0	
15.0	-	6.7	6.8
2.0		5.15	100
50.0		10	- 5.15
		40.0 -	5.15
		100.0	
5.0		10	1 0.13
-	5.1-		



5.13	2.0	2.0
- 5.17	/	2.0

15 30 30

7.3

7.3

2

				/	/	
40 80	230 300	200	300 400	800 900	193.7	
40 80	230 300	200	350 400	800 1000	196.0	
40 80	230 300	200	300 400	600 1000	306.8	
40 80	230 300	200	200 400	800 1000	217.6	

0 0.50 1.00 2.00 4.00 5.00 5.19.3  
50 10.0 5.13 10.0 - 5.17  
30 15 30 30

	0	1.00	2.00	3.00	4.00	5.00		5.20.3
50			10.0		5.13			
	0	0.50	1.00	2.00	4.00	5.00		5.21.3
50			10.0		5.13			
	0	1.00	2.00	3.00	4.00	5.00		5.22.3
50			10.0		5.13	10.0	-	5.17
	30		15	30		30		

3

	/					
	0.0	1.0	2.0	4.0	8.0	10.0
	0.0	2.0	4.0	6.0	8.0	10.0
	0.0	1.0	2.0	4.0	8.0	10.0
	0.0	2.0	4.0	6.0	8.0	10.0

5.16

5.12

8.3

$$\rho = \frac{(\rho - \rho_0) \times 10^{-3}}{\times 1}$$

1

$\rho$

$/ 3$

$\rho$

$\mu /$

$\rho_0$

$\mu /$

1

2

273 101.325

3

2

$$\rho = \frac{(\rho - \rho_0) \times 10^{-3}}{\times 1}$$

2

$\rho$

$\mu / 3$

$\rho$

$\mu /$

$\rho_0$

$\mu /$

1

2

3

6

3

3

1

1

4

2

6

1

1

4

2

2 1  
0.999  
20 20%  
10% 10 1  
20%

1+1 24

	/ <sup>3</sup>	/ <sup>3</sup>	/ <sup>3</sup>	/ <sup>3</sup>	μ/ <sup>3</sup>	μ/ <sup>3</sup>	μ/	μ/	μ/	μ/
	0.2	0.8	0.4	1.6	0.1	0.4	0.2	0.8	0.3	1.2
	0.4	1.6	2	8	0.1	0.4	0.6	2.4	0.6	2.4
	0.2	0.8	0.4	1.6	0.1	0.4	0.2	0.8	0.2	0.8
	2	8	4	16	0.7	2.8	2	8	2	8

150<sup>3</sup>

50<sup>3</sup>

0.600<sup>3</sup>

50.0

100.0

5.0

10.0



	$\bar{\mu} (\mu / ^3)$	0.7	/	5.7	9.6
	(%)	2.4 17	/	1.8 8.2	1.4 13
	(%)	18	/	16	18
	$(\mu / ^3)$	0.1	/	0.5	2.1
	$(\mu / ^3)$	0.3	/	2.6	5.1

1 2 3      10 30 60

4 5 6      10 30 60

30

50<sup>3</sup>

0.600<sup>3</sup>

	( / )	58.0	0.640	1.04	6.30
	( / )	55.3	0.587	1.00	6.21
	(%)	-8.6 1.7	-17 3.1	-11 4.8	-16 24
	$\bar{\mu} \pm 2 \text{ —}$	-4.7±7.0	-8.3±16	-3.8±10	3.6±33
	( / )	58.0	0.640	1.04	6.30
	( / )	52.0	0.577	0.979	5.90
	(%)	-16 -6.2	-18 4.5	-9.8 -2.9	-18 8.9
	$\bar{\mu} \pm 2 \text{ —}$	-10±7.6	-8.3±18	-5.9±5.0	-6.3±19

30

30