

HJ 668-2013

---

-

Water quality-Determination of total nitrogen by flow injection analysis

FIA and N-(1-naphthyl)ethylene diamine dihydrochloride

spectrophotometry

2013-10-25

2014-01-01

---

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

-

A

2013 10 25

2014 1 1

1

-

-

10mm

0.03mg/L

N

0.12 mg/L

~10mg/L

2

HJ/T 91  
HJ/T 164

3

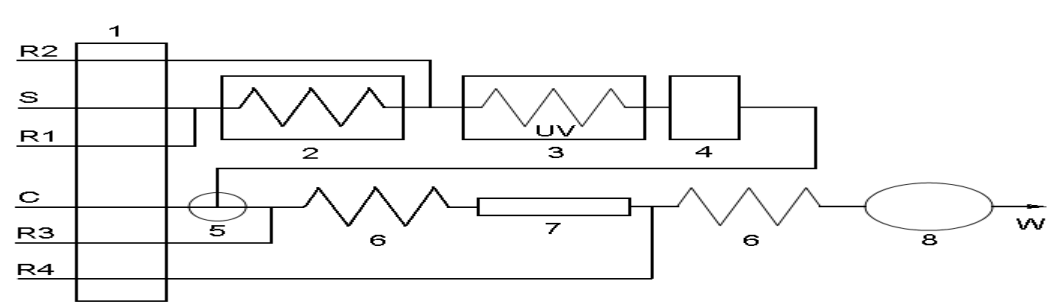
3.1

3.2

95 ± 2

540nm

1



1	2	95	3	4
5	6		7	8
R1	5.16	R2	5.17	R3
R4	5.19	C	5.27	S
	1	-		W

4

4.1

4.2					100mg/L	250mg/L	100
mg/L	10000mg/L						
5							
	10MΩ·cm	25					5.28
5.2	$\rho(\text{HCl})=1.18\text{g/ml}$						
5.3	$\rho(\text{H}_3\text{PO}_4)=1.69\text{g/ml}$						
5.4	$\rho(\text{H}_2\text{SO}_4)=1.84\text{g/ml}$						
5.5	NaOH						
5.6	$\text{K}_2\text{S}_2\text{O}_8$						
5.7	$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$						
5.8	$\text{NH}_4\text{Cl}$						
5.9	$\text{Na}_2\text{EDTA} \cdot 2\text{H}_2\text{O}$						
5.10	$\text{C}_6\text{H}_8\text{N}_2\text{O}_2\text{S}$						
5.11	$\text{C}_{12}\text{H}_{16}\text{Cl}_2\text{N}_2$						
5.12	$\text{KNO}_3$		$105^\circ\text{C} \pm 5^\circ\text{C}$				
5.13	$\text{KNO}_2$						
5.14	$\text{H}_2\text{NCH}_2\text{COOH}$						
5.15	$c(\text{NaOH})=15\text{mol/L}$						
	600g	5.4			1L		
5.16							
	49.0g	5.6	900ml		10.0g		5.7
	1000ml					1	
5.17		pH=9.0					
	25.0g		5.7	900ml			5.15
pH	9.0	1000ml				1	
5.18		pH=8.5					
	85.0g	5.8	1.0g		5.9		800ml
	1000ml			5.15	pH	8.5	4
	1						
5.19							
	100ml	5.3	600ml		40.0g	5.10	1.0g
5.11		1000ml				4	1
5.20		$\rho(\text{N})=1000\text{mg/L}$					
	7.218g	5.12			1000ml		

	4		6
5.21		$\rho(N)=100\text{mg/L}$	
	10.00ml	5.20	100ml
	4	1	
5.22		$\rho(N)=10.0\text{mg/L}$	
	10.00ml	5.21	100ml
	4	7d	
5.23		$\rho(N)=1000\text{mg/L}$	
	5.360g	5.14	1000ml
	4		3
5.24		$\rho(N)=10.0\text{mg/L}$	
		5.23	10.00ml 1000ml
5.25		$\rho(N)=1000\text{mg/L}$	
	6.079g	5.13	1000ml
		4	1
5.26		$\rho(N)=10.0\text{mg/L}$	
	10.0ml	5.25	1000ml

5.27

5.28 99.99%

6

6.1

10mm

6.2 0.0001g

6.3 pH 0.02

6.4 40KHz

6.5

7

HJ/T91 HJ/T 164

pH ≤ 2 7d -20 1 5.4

8

8.1

20min

8.2~8.4

8.2

8.2.1

5.21

100ml

6

0.00 mg/L 0.15 mg/L 1.00 mg/L 2.00 mg/L 5.00 mg/L

10.0mg/L

8.2.2

8.2.1

N mg/L

8.3

8.4

8.3

9

9.1

N mg/L

1

$$\rho = \frac{y-a}{b} \times f$$

1

$\rho$ —

mg/L

$y$ —

$a$ —

$b$ —

$f$ —

9.2

1.00mg/L

1.00mg/L

10

10.1

6

0.10mg/L 1.22mg/L 2.99mg/L

1.0%~9.1% 0.6%~6.1% 0.6%~6.7%

3.3% 2.4% 1.7%

0.02 mg/L 0.07 mg/L 0.08mg/L

0.03mg/L 0.10mg/L 0.16mg/L

10.2

6 0.50±0.06mg/L 1.22±0.09mg/L 2.99±0.016 mg/L  
 0.4%~8.3% 0.0%~5.7% 0.3%~3.0%  
 3.6%±5.8% 1.4%±4.4% 1.3%±2.4%

6 0.25 mg/L~2.94 mg/L 0.53 mg/L~3.58 mg/L 0.67 mg/L~5.34  
 mg/L 3 98.0%~108% 92.0%~103%  
 90.0%~108% 103%±7.2% 97.9%±8.0% 96.6%±14.3%

11

11.1

2

11.2

$\gamma$  0.995

10

5%

11.3

10% 10 10% >1.00mg/L  
 1.00mg/L 5%  
 5%

11.4

10% 10  
 80~120%

11.5

11.5.1

5.24 3 1  
 8.2 5.24  
 5.22 2 R R 90%

$$R = \frac{\rho_1}{\rho_2} \times 100\% \quad 2$$

R— %  
 $\rho_1$ — 5.24 mg/L  
 $\rho_2$ — 5.22 mg/L

11.5.2

5.16



5.26

1

1

5.22

10%

A

A.1

A.1.1

A.1.2

A.1.3

A.1.4

A.2

G2

100 g

A.1.1

500 ml 70

80

45min 60min

G2

