

## Nitrites

### Function: Differential Pulse Voltammetry (DPV/a)

Start Potential (mV)	-200
End Potential (mV)	-1000
Current range	10,24 $\mu$ A
Scan Speed (mV/s)	50
Number of cycles	3
Delay before sweep (s)	5
Purge and stir time (s)	300
Stirring speed (rpm)	300
Drop Size (a.u.)	60

### Nitrite concentrated standard solution (1 g/l)

Dissolve 4.926 g of pure and fresh NaNO<sub>2</sub> in 1 l of distilled water, in a volumetric flask. ( $MM_{\text{NaNO}_2} = 69.00$ ;  $MM_{\text{NO}_2} = 46.001$ ).

### Supporting electrolyte

#### 0.05 M KSCN solution in 0.2 M HClO<sub>4</sub>

Dissolve 4.86 g of KSCN in 800 ml of distilled water. Add 17.2 ml of 70% HClO<sub>4</sub> and bring to volume in a 1 l volumetric flask with distilled water.

### 750 mg/l Diphenylamine solution

Dissolve 0.75 g of diphenylamine sulphate, di sodium salt, in 1 l of distilled water.

### Procedure

Pour 10 ml of sample in the cell, add 5 ml of KSCN solution and 0.6 ml of diphenylamine solution. Check that pH is 1 – 2.

### Working standard solution (1 mg/l)

Dilute 1+999 the concentrated standard solution at the moment of the analysis.

### Warning

The sample must tightly be preserved in closed containers (avoiding bubbles of air) and it must be analysed as soon as possible

## Analytical report

Analysis: seawater

Sample Concentration = 1.40  $\mu\text{g/l}$

Method: 5 additions

### Volumes Table

Solvent Volume	0 (ml)
Supporting Sol.	5.6 (ml)
Sample Volume	10 (ml)
Standard Conc.	1000 ( $\mu\text{g/l}$ )

### Height Table

#	Peak Pot.	Height
0	-490.6	19.36 nA
1	-496.1	106.8 nA
2	-494.5	200.4 nA
3	-492.2	292.3 nA
4	-494.5	384.4 nA
5	-492.2	486.3 nA

### Regression Data

#	Add. Conc.	Height x dilution
0	0 $\mu\text{g/l}$	30.21 nA
1	10.0 "	167.8 nA
2	20.0 "	316.7 nA
3	30.0 "	464.8 nA
4	40.0 "	615.1 nA
5	50.0 "	783.0 nA

$$y = ax + b$$

$$a = 15.01 \text{ nA} \cdot \text{l} / \mu\text{g}$$

$$b = 20.97 \text{ nA}$$

$$r^2 = .9991$$

