

Silver

Function: Differential Pulse Stripping Voltammetry (DPS/a)

Electrode: Glassy carbon

Start Potential (mV)	-700
End Potential (mV)	0
Current range	102,4 μ A
Scan Speed (mV/s)	20
Deposition time (s)	120
Deposition Pot. (mV)	-700
Number of cycles	2
Delay before sweep (s)	5
Purge and stir time (s)	300
Stirring speed (rpm)	500
Drop Size (a.u.)	0
Electrode	External

Silver concentrated standard solution (1 g/l)

Dissolve 1.57 g of AgNO_3 in 1 l of distilled water, in a volumetric flask. Store the solution in a dark bottle. ($\text{MM}_{\text{AgNO}_3} = 169.88$; $\text{MM}_{\text{Ag}} = 107.868$).

Supporting electrolyte

Solution 1 M KNO_3 . Dissolve 10.11 g of KNO_3 in 1 l of distilled water, in a volumetric flask.

Procedure

Add 2 ml of supporting electrolyte to 20 ml of sample.

Working standard solution (10 mg/l)

Dilute 1+99 the concentrated standard solution with distilled water. Prepare the solution at the moment of the analysis and store in the dark.

Alternative supporting electrolyte

Add 10 ml of 37% HCl to 10 ml of sample.

Analytical Report

Analysis: Waste water from photograph bath

Sample Concentration = 124 $\mu\text{g/l}$

Volumes table

Solvent Volume	0 (ml)
Supporting Sol.	1 (ml)
Sample Volume	20 (ml)
Standard Conc.	10000 ($\mu\text{g/l}$)

Peak table

#	Peak Pot.	Height
0	-195.9	82.41 μA
1	-203.8	142.0 μA
2	-208.4	209.2 μA

Regression Data

#	Add Conc.	Height x dilution	
0	0 $\mu\text{g/l}$	86.53 μA	$y = ax + b$
1	100 "	150.5 μA	$a = 687.0 \text{ nA} \cdot \text{l} / \mu\text{g}$
2	200 "	223.9 μA	$b = 84.96 \mu\text{A}$
			$r^2 = .9984$

