Manganese

Function: Differential Pulse Stripping Voltammetry (DPS/a)
Electrode: Glassy carbon

Start Potential	(mV)	900
End Potential	(mV)	-100
Current range		102.4 μA
Scan Speed	(mV/s)	50
Deposition time	(s)	300
Deposition Pot.	(mV)	900
Number of cycles		1
Delay before sweep	(s)	5
Purge and stir time	(s)	20
Stirring speed	(rpm)	500
Drop Size	(a.u.)	60
Electrode type		External

Manganese concentrated standard solution (1 g/l)
Dissolve 1 g of manganese in a minimum volume of 8 M HNO_3. Bring to volume in a 1 l volumetric flask with distilled water.

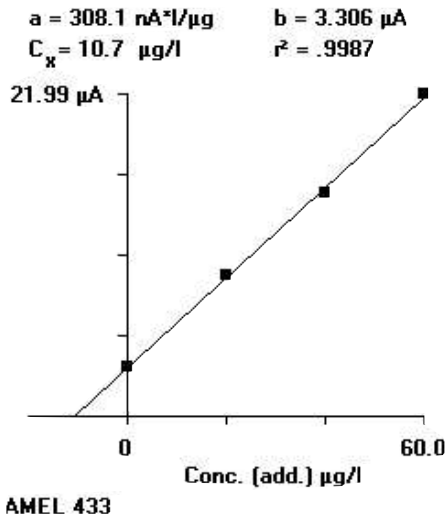
Supporting Electrolyte
Ammonia buffer 2 M, pH 9
Dissolve 107 g of NH_4Cl in 800 ml of distilled water. Add 26% NH_3 until pH 9.
Bring to volume with distilled water, in a 1 l volumetric flask

Procedure
Add 2 ml of supporting electrolyte to 20 ml of neutralised sample solution and adjust pH.

Working standard solution (1 mg/l)
Dilute 1+999 the concentrated standard solution with distilled water. Prepare the solution at the moment of the analysis.

Warnings
The scanning towards very negative potential allows an electrochemical cleaning of the electrode, after the reduction of MnO_2.

Analytical Report
Analysis: Tap water
Sample Concentration = 10.7 µg/l
Method: 3 additions



Volumes Table

Solvent Volume	0 (ml)
Supporting Sol.	1 (ml)
Sample Volume	20 (ml)
Standard Conc.	1000 (µg/l)

Height Table

#	Peak Pot.	Height
0	322.5	3.158 µA
1	314.8	9.021 µA
2	310.9	13.97 µA
3	311.9	19.81 µA

Regression Data

#	Add.Conc.	Height x dilution
0	0 µg/l	3.316 µA
1	20.0 "	9.653 µA
2	40.0 "	15.23 µA
3	60.0 "	21.99 µA

y = ax + b
a = 308.1 nA*l/µg
b = 3.306 µA
r^2= .9987