Saccharin in nickel bath

Function: Differential Pulse Voltammetry (DPV/a)

Start Potential (mV)	-900
End Potential (mV)	-1300
Current range	102.4
Scan Speed (mV/s)	30
Number of cycles	3
Delay before sweep (s)	5
Purge and stir time (s)	300
Stirring speed (rpm)	300
Drop Size (a.u.)	60

Saccharin concentrated standard solution (1 g/l) – Working standard solution
Dissolve 100 mg of pure saccharin in 100 ml of 95° ethanol in a volumetric flask.

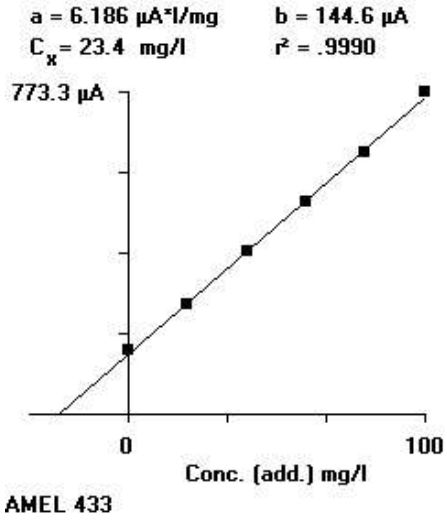
Supporting electrolyte
0.1 M HCl
Dilute 0.8 ml of 37% HCl in 100 ml of distilled water.

Procedure
Sample treatment
Pour 10 ml of sample in a 100 ml separatory funnel. Add 1 ml of 37% HCl and 5 ml of methanol. Extract for 4 times with 10 ml of ethyl ether. Collect all the ether extracts and dry in a rotating evaporator. Dry 10 minutes at 110°C in a oven. Add 10 ml of 0.1 M HCl to the residue.

Voltammetric analysis
Pour 10 ml of 0.1 M HCl in the cell, add 50-300 µl of the above sample solution.

Warnings
It is necessary to subtract the blank curve before the calculation of the peak height (point to point blank subtraction function).

Analytical Report
Analysis: Nickel bath
Sample Concentration = 0.65 g/l
Method: 5 additions
Blank: point to point subtraction



Volumes Table

Solvent Volume	0 (ml)
Supporting Sol.	10 (ml)
Sample Volume	0.3 (ml)
Standard Conc.	1000 (mg/l)

Height Table

#	Peak Pot.	Height
0	-1066.5	16.70 µA
1	-1066.5	21.04 µA
2	-1067.4	25.04 µA
3	-1068.8	29.09 µA
4	-1069.7	32.94 µA
5	-1072	37.37 µA

Regression Data

#	Add Conc.	Height x dilution
0	0 mg/l	573.5 µA
1	167 "	726.2 µA
2	333 "	868.1 µA
3	500 "	1.013 mA
4	667 "	1.153 mA
5	833 "	1.314 mA

y = ax + b
a = 879.3 nA*l/mg
b = 575.0 µA
r^2= .9996