Sulphur in gasoline and distilled oil

Function: Differential Pulse Voltammetry (DPV/a)

Start Potential (mV)	-250
End Potential (mV)	100
Current range	10,24
Scan Speed (mV/s)	20
Number of cycles	3
Delay before sweep (s)	5
Purge and stir time (s)	300
Stirring speed (rpm)	300
Drop Size (a.u.)	60

Sulphur concentrated standard solution (1 g/l)
Dissolve 0.1 g of pure Sulphur in 100 ml of toluene, in a volumetric flask. Store the solution in a glass bottle.

Inner solution for reference electrode
5% LiCl solution in absolute ethanol. Store the solution in a glass bottle.

Supporting Electrolyte
0.04 M H_2SO_4 in absolute ethanol
Dilute 2.2 ml of 96% H_2SO_4 in 100 ml of absolute ethanol, in a volumetric flask. Store the solution in a glass bottle.

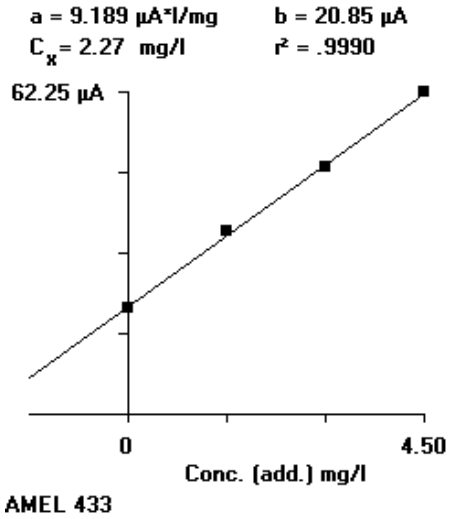
Procedure
Add 1 - 2 ml of sample to 10 ml of supporting electrolyte.

Working standard solution (40 mg/l)
Dilute the concentrated standard solution 4+96 in absolute ethanol, at the moment of the analysis.

Warnings
- Store samples and solutions in glass bottles. Hermetically closed. Do not use plastic ware.
- Reference electrode has to be voided, rinsed with water and ethanol and filled with the LiCl inner solution.
- Make the nitrogen bubbling in ethanol before send itself into the cell. In this way loss of solvent can be avoided during deaeration

Analytical Report

Analysis: green gasoline
Sample Concentration = 2.27 mg/l
Method: 3 additions



Volumes Table

Solvent Volume	0 (ml)
Supporting Sol.	8 (ml)
Sample Volume	2 (ml)
Standard Conc.	10 (mg/l)

Height Table

#	Peak Pot.	Height
0	-69.3	4.098 µA
1	-73.8	6.872 µA
2	-77.5	9.047 µA
3	-81.9	11.42 µA

Regression Data

#	Add.Conc.	Height x dilution
0	0 mg/l	20.49 µA
1	1.50 "	35.39 µA
2	3.00 "	47.95 µA
3	4.50 "	62.25 µA

y = ax + b
a = 9.189 µA*l/mg
b = 20.85 µA
r^2 = .9990