VA Application Note No. V-95

Title:	**Quinine in bitter lemon**

Summary:	Quinine can be determined by polarography at the DME using Britton-Robinson buffer at pH = 7.0 as supporting electrolyte.

Sample:	Bitter lemon (soft drink)
Sample preparation:	none

Determination of quinine

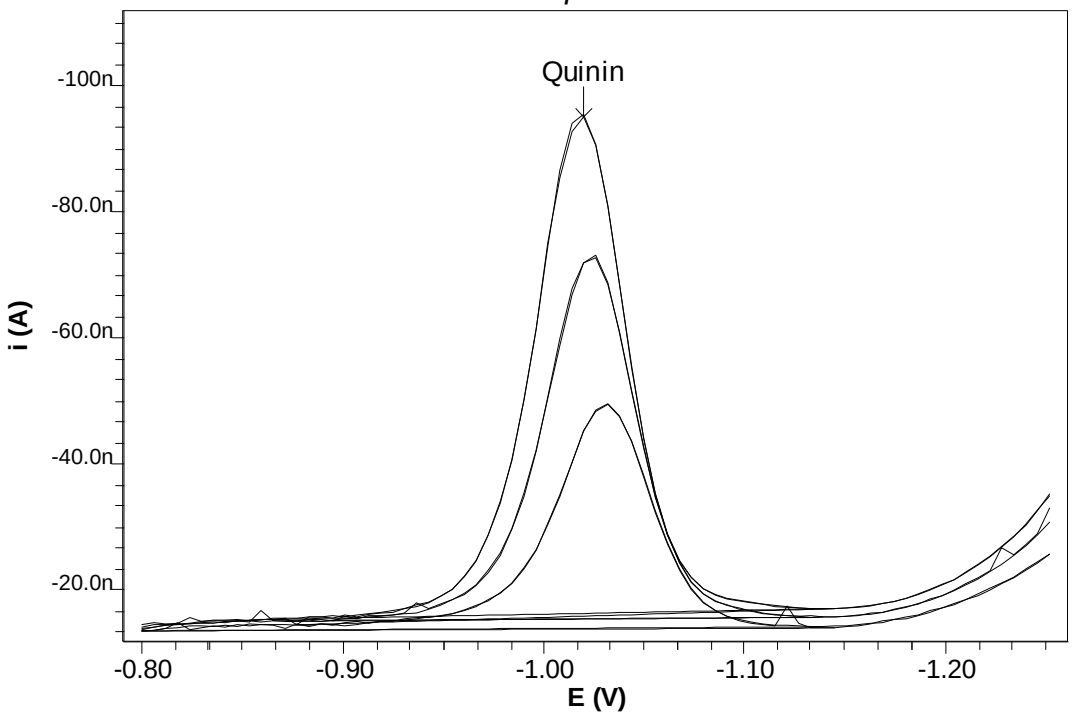
Electrolyte	**Britton-Robinson buffer pH = 7:** $c(H_3PO_4)$ = 0.04 mol/L + $c(CH_3COOH)$ = 0.04 mol/L + $c(H_3BO_3)$ = 0.04 mol/L, adjust pH to 7.0 with NaOH	
Measuring solution	10 mL buffer + 1 mL sample	
Working electrode (WE)	**MME** (Multi-Mode Electrode) 6.1246.020	
Auxiliary electrode (AE)	**Pt** 6.0343.000	
Reference electrode (RE)	Ag/AgCl/KCl (3 mol/L): 6.0728.020 + 6.1245.010	
Parameters	Working electrode	DME
	Stirrer speed	2000 rpm
	Mode	DP
	Purge time	300 s
	Equilibration time	5 s
	Pulse amplitude	50 mV
	Start potential	–800 mV
	End potential	–1250 mV
	Voltage step	6 mV
	Voltage step time	0.4 s
	Sweep rate	15 mV/s
	Peak potential quinine	–1130 mV

Results:	Quinine
	33.5 mg/L

Determination of quinine

Quinine in Bitter lemon

sample

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Quinin
c =   33.473 mg/l
+/-    0.419 mg/l (1.25%)
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