VA Application Note No. V - 167

Title:	**Cadmium in a phosphatation bath**

Summary:	The concentration of Cd in a Zn phosphatation bath is determined by polarography in HCl electrolyte.

Sample:	Zn phosphatation bath
Sample preparation:	None

Analysis of Cd

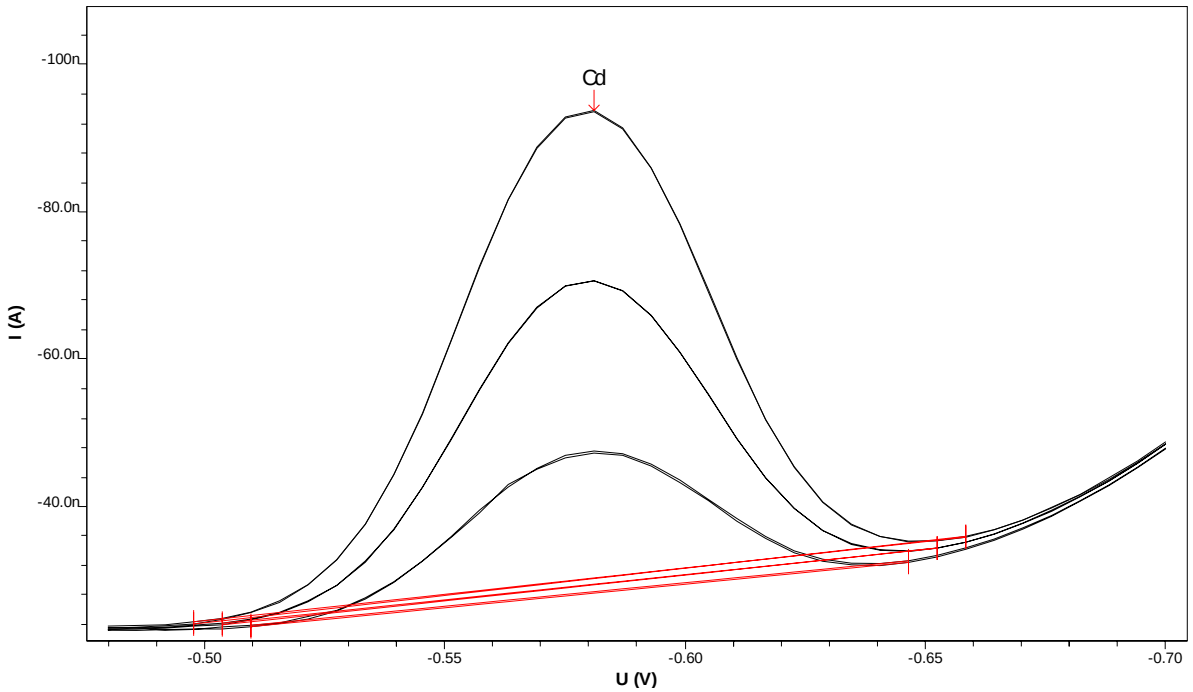
HCl solution	w(HCl) = 30%	
Measuring solution	10 mL H_2O + 1 mL HCl solution + 1 mL phosphatation bath	
Working electrode (WE)	**MME** (Multi Mode Electrode)	6.1246.020
Auxiliary electrode (AE)	**Pt**	6.0343.000
Reference electrode (RE)	Reference system: Ag/AgCl/KCl (3 mol/L) Intermediate electrolyte: c(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	0.05 V
Start potential	-0.48 V
End potential	-0.7 V
Voltage step	0.006 V
Voltage step time	0.6 s
Sweep rate	0.01 V/s
Peak potential Cd	-0.58 V

Results:	Cd
	2.6 mg/L

Determination of Cd



Cd
c = 2.577 mg/L
+/- 0.005 mg/L (0.20%)