VA Application Note No. V - 158

Title:	**Indium in a tin bath**

Summary:	The concentration of In in a Sn bath is determined in a HCl / Urotropin® containing electrolyte by anodic stripping voltammetry (ASV). The determination is linear up to approx. 0.5 mg/L with respect to the concentration of In in the measuring vessel. The standard addition solution is also prepared with HCl and Urotropin®.

Sample:	Acid Sn bath
Sample preparation:	None

Analysis of In

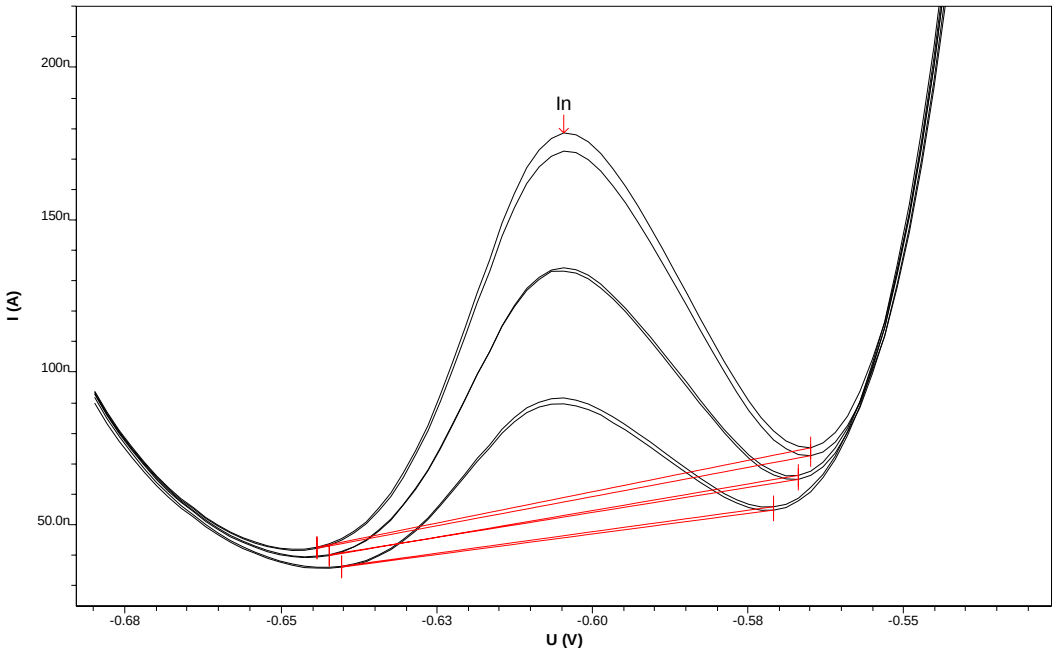
HCl solution	w(HCl) = 30%	
Urotropin® solution	c(Urotropin®) = 2 mol/L *Urotropin®: Hexamethylenetetramine*	
Measuring solution	10 mL H_2O + 0.05 mL Sn bath + 3 mL HCl solution + 3 mL Urotropin® solution	
Working electrode (WE)	**MME** (Multi Mode Electrode)	6.1246.020
Auxiliary electrode (AE)	**Pt**	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	HMDE
Stirrer speed	2000 rpm
Mode	DP
Purge time	300 s
Deposition potential	-0.68 V
Deposition time	5 s
Equilibration time	5 s
Pulse amplitude	0.05 V
Start potential	-0.68 V
End potential	-0.53
Voltage step	0.002 V
Voltage step time	0.3 s
Sweep rate	0.0067 V/s
Peak potential In	-0.60 V

Results:	In
	62.0 mg/L

Determination of In



In
c = 62.021 mg/L
+/- 1.056 mg/L (1.70%)