

VA Application Note No. V - 161

Title:	Copper in a cyanidic copper bath
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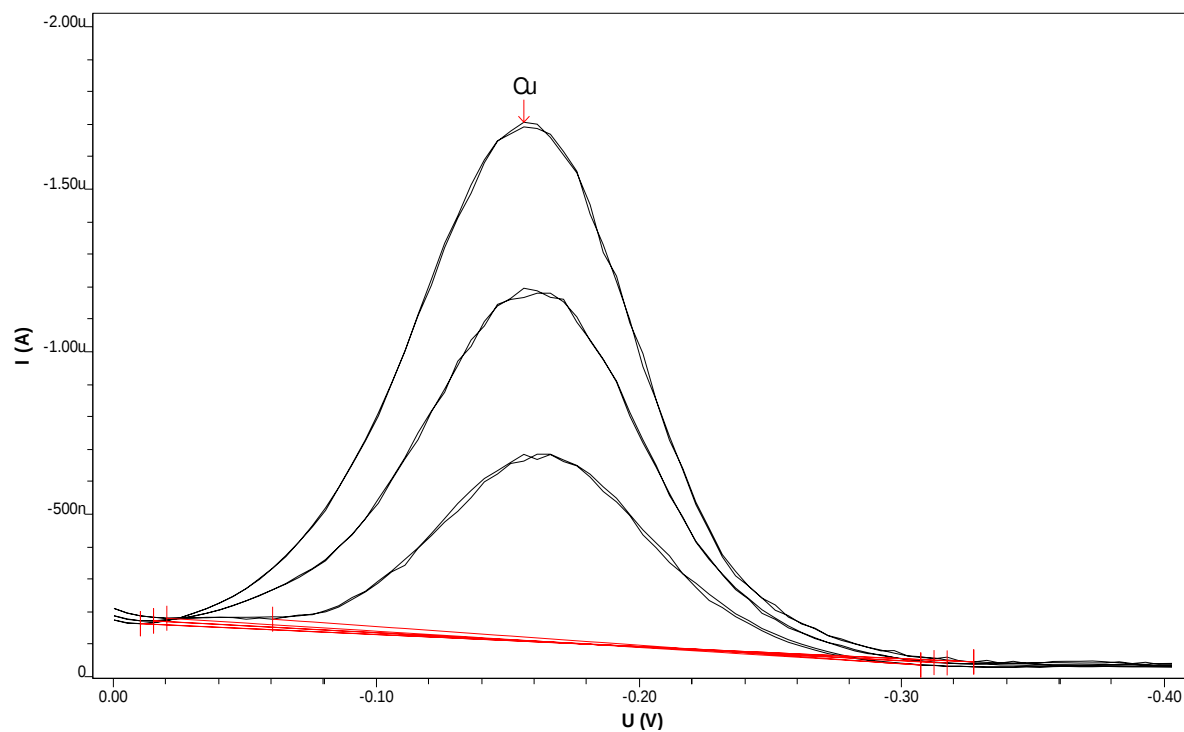
Summary:	The concentration of Cu in a cyanidic Cu bath is determined by polarography.
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Sample:	Cyanidic Cu bath
Sample preparation:	None

Analysis of Cu		
KCl solution	c(KCl) = 3 mol/L	
HCl solution	w(HCl) = 30%	
Measuring solution	5 mL H ₂ O + 5 mL KCl solution + 0.2 mL HCl solution + 25 µL Cu 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)	6.0728.020
	Intermediate electrolyte: c(KCl) = 3 mol/L	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 V
	End potential	-0.4 V
	Voltage step	0.005 V
	Voltage step time	0.8 s
	Sweep rate	0.0062 V/s
	Peak potential Cu	-0.17 V

Results:	Cu
	5.5 g/L

Determination of Cu



Cu
c = 5.476 g/L
+/- 0.084 g/L (1.53%)

