

# VA Application Note No. V - 182

**Title:** Suppressor «Top Lucina  $\alpha$ -M» in acid copper baths (Okuno Chemical Industries)

**Summary:** Determination of suppressor «Top Lucina  $\alpha$ -M» in acid copper baths by dilution titration (DT) using cyclic voltammetric stripping (CVS).

**Sample:** Acid copper electroplating bath

**Sample preparation:** None

## Analysis of suppressor «Top Lucina $\alpha$ -M»

**Electrolyte** Virgin make-up solution (VMS)  
CuSO<sub>4</sub>, H<sub>2</sub>SO<sub>4</sub> and NaCl concentrations according to supplier specifications.

**Measuring solution** 50 mL VMS

**Working electrode (WE)** **Pt-RDE:**  
Drive shaft 6.1246.000  
+ Pt tip for CVS 6.1204.160

**Auxiliary electrode (AE)** **Pt** 6.0343.000

**Reference electrode (RE)** Reference system: Ag/AgCl/KCl (3 mol/L) 6.0728.020  
Intermediate electrolyte: KNO<sub>3</sub> sat.:H<sub>2</sub>O (3:1) 6.1245.010

### Parameters

Working electrode	RDE (hydrodynamic measurement)
Stirrer speed	2000 rpm
Mode	CVS
Calibration technique	DT
Start potential	1.625 V
First vertex potential	-0.175 V
Second vertex potential	1.625 V
Voltage step	0.006 V
Sweep rate	0.1 V/s
Peak potential (Cu)	0.2 V $\pm$ 0.2
Evaluation ratio (Q/Q(0))	0.5

**Determination of suppressor «Top Lucina  $\alpha$ -M»**

