

# VA Application Note No. V - 144

**Title:** Suppressor « Ronastan TP Additive» in a tin-lead bath Ronastan TP (Rohm and Haas Electronic Materials)

**Summary:** Determination of suppressor « Ronastan TP Additive» in a tin/lead bath Ronastan TP by dilution titration (DT) using cyclic voltammetric stripping (CVS).

**Sample:** Tin-lead plating bath  
**Sample preparation:** None

<b>Analysis of suppressor « Ronastan TP Additive»</b>																							
<b>Electrolyte</b>	Virgin make-up solution (VMS) Solderon Sn concentrate, Solderon Pb concentrate, Ronastan TP acid and Ronastan TPH anti-oxidant concentrations according to supplier specifications.																						
<b>Measuring solution</b>	100 mL VMS																						
<b>Working electrode (WE)</b>	<b>Pt-RDE:</b> Drive shaft .....6.1246.000 + Pt tip for CVS .....6.1204.160																						
<b>Auxiliary electrode (AE)</b>	<b>Pt.....6.0343.000</b>																						
<b>Reference electrode (RE)</b>	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																						
<b>Parameters</b>	<table border="1"> <tbody> <tr> <td>Working electrode</td> <td>RDE (hydrodynamic measurement)</td> </tr> <tr> <td>Stirrer speed</td> <td>2000 rpm</td> </tr> <tr> <td>Mode</td> <td>CVS</td> </tr> <tr> <td>Calibration technique</td> <td>DT</td> </tr> <tr> <td>Start potential</td> <td>0.475 V</td> </tr> <tr> <td>First vertex potential</td> <td>-0.625 V</td> </tr> <tr> <td>Second vertex potential</td> <td>0.475</td> </tr> <tr> <td>Voltage step</td> <td>0.006 V</td> </tr> <tr> <td>Sweep rate</td> <td>0.08 V/s</td> </tr> <tr> <td>Peak potential (Sn)</td> <td>-0.25 V ± 0.1 V</td> </tr> <tr> <td>Evaluation ratio (Q/Q(0))</td> <td>0.5</td> </tr> </tbody> </table>	Working electrode	RDE (hydrodynamic measurement)	Stirrer speed	2000 rpm	Mode	CVS	Calibration technique	DT	Start potential	0.475 V	First vertex potential	-0.625 V	Second vertex potential	0.475	Voltage step	0.006 V	Sweep rate	0.08 V/s	Peak potential (Sn)	-0.25 V ± 0.1 V	Evaluation ratio (Q/Q(0))	0.5
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**Determination of suppressor « Ronastan TP Additive »**

