

VA Application Note No. V- 17

Title:	Chromium and selenium in a silver plating bath
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Summary:	Determination of Cr and Se in a silver plating bath
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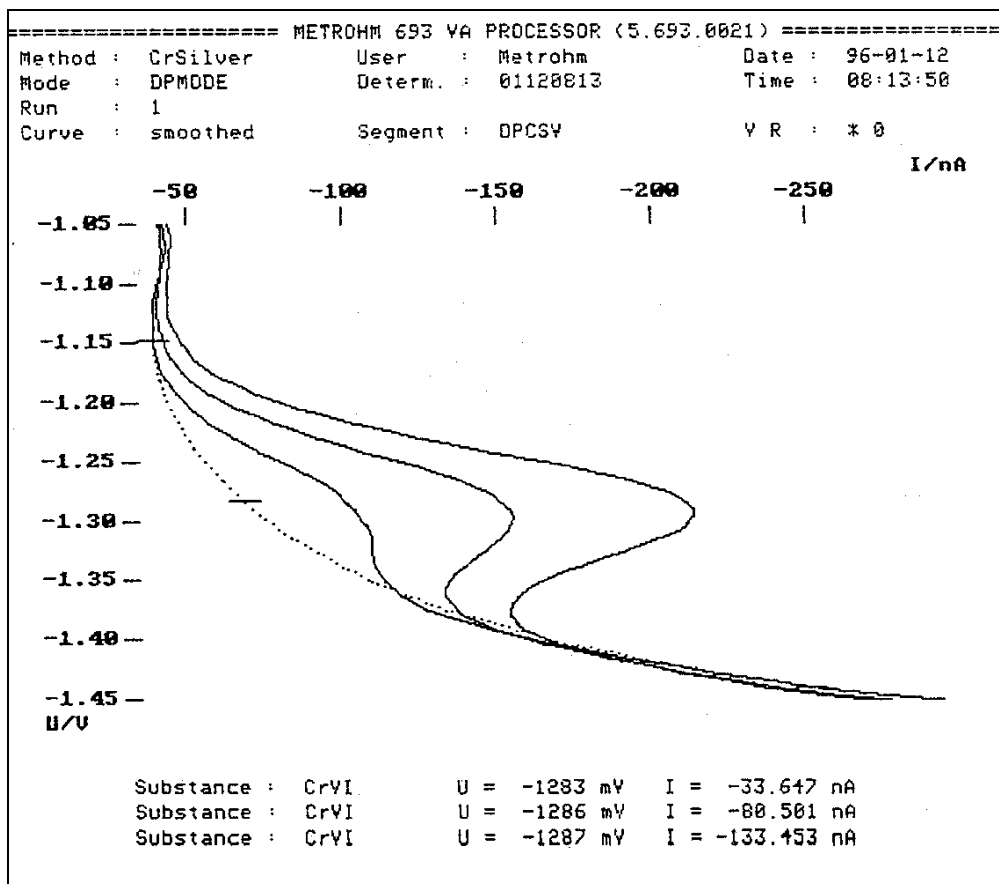
Sample:	Strongly alkaline silver bath containing 2.5 g/L CN^- and 60 g/L Ag
Sample Preparation:	Wet digestion with HNO_3

Chromium:	
Electrolyte:	Na-Acetate, diethylenetriaminepentaacetic acid (DTPA), NaNO_3 .
AE:	Pt
RE:	Ag/AgCl/KCl 3M
Parameters:	DPCSV (-50 mV), HMDE $U_{\text{meas}} = -1000 \text{ mV (60s)}$, $U_{\text{start}} = -1000 \text{ mV}$, $U_{\text{end}} = -1500 \text{ mV}$ $E_p(\text{Cr}) = -1280 \text{ mV}$

Selenium:	
Electrolyte:	EDTA, Cu standard, $(\text{NH}_4)_2\text{SO}_4$ pH = 2.2 with H_2SO_4
AE:	Pt
RE:	Ag/AgCl/KCl 3M
Parameters:	SQWCSV (+40 mV), HMDE $U_{\text{meas}} = -500 \text{ mV (60s)}$, $U_{\text{start}} = -550 \text{ mV}$, $U_{\text{end}} = -900 \text{ mV}$ $E_p(\text{Se}) = -650 \text{ mV}$

Results:	Cr $\mu\text{g/L}$	Se $\mu\text{g/L}$
	33.5	< 500

Determination of chromium



Determination of selenium

