VA Application Note No. V- 3

Title:	**Nickel, cobalt and iron in a polyterephthalic acid (PTA) solution**

***Summary*:**	Determination of Ni, Co and Fe in a PTA solution containing HCl.

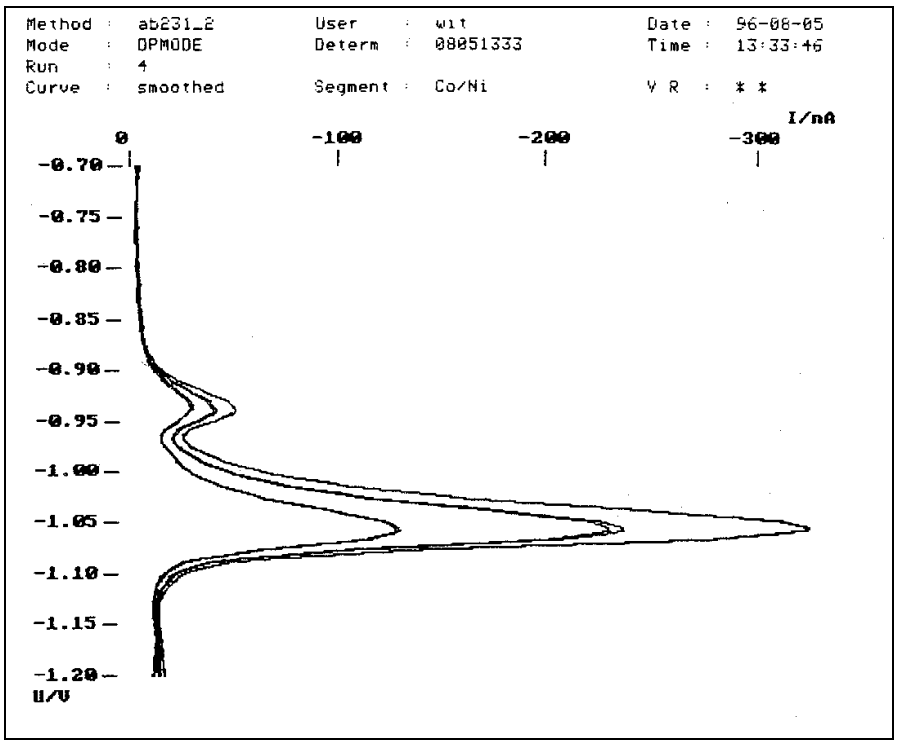
Sample:	PTA in HCl
Sample Preparation:	none

Nickel and Cobalt:	
Electrolyte:	Dimethylglyoxime in ethanol, NH_4Cl / NH_3 buffer
AE:	Pt
RE:	Ag/AgCl/KCl 3M
Parameters:	DPCSV (-50 mV), HMDE U_{meas} = –700 mV (30s), U_{start} = –700 mV, U_{end} = –1200 mV Ep (Ni) = – 935 mV, Ep (Co) = –1050 mV

Iron:	
Electrolyte:	Catechol, Pipes buffer, pH = 7.0
AE:	Pt
RE:	Ag/AgCl/KCl 3M
Parameters:	DPCSV (-50 mV), HMDE U_{meas} = –100 mV (60s), U_{start} = –100 mV, U_{end} = –700 mV Ep (Fe) = – 405 mV

Results:	**Ni** µg/L	**Co** µg/L	**Fe** µg/L
	15.5	**61**	**519.9**

Determination of nickel and cobalt



Determination of iron