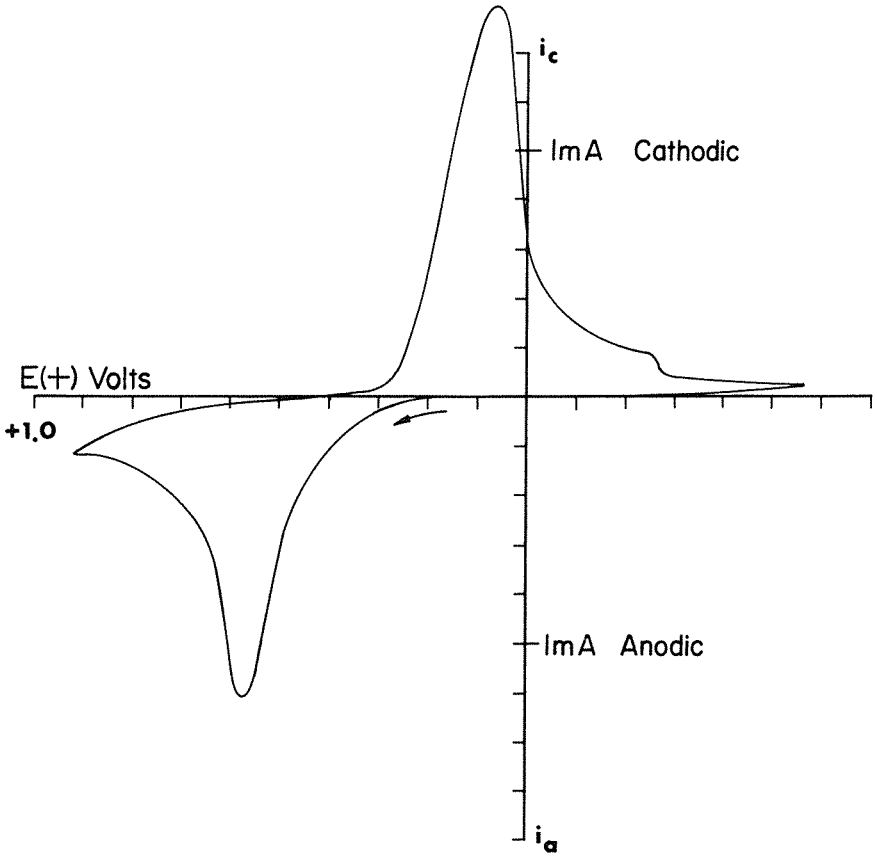
CV NOTES

CYANIDE



REACTION I

$$Ag^{\circ} + 2CN^{-} \rightarrow Ag(CN)_2^{-} + e^{-}$$

SAMPLE:	HCN
MEDIUM:	0.1M NaOH
CONC.:	0.1 mg/mL
RATE:	200 mV/sec
ELECTRODE:	Silver Planar
REFERENCE:	RE-1, Ag/AgCl/3M KCl
MODEL:	CV-1A

Accurate detection of cyanide is important in many ways. For example, cyanide is an essential ingredient in electrochemical plating processes. It is also a highly toxic anion, causing inactivation of certain respiratory enzymes.

Cyanide can be detected by a novel electrochemical technique utilizing a silver electrode. It is thought that metallic silver is oxidized from the electrode surface to form a cyano complex via Reaction I. Detection by this method appears to be extremely sensitive and readily reversible. Other anions, such as the halides and thiocyanide, are detectable by this method as well.

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