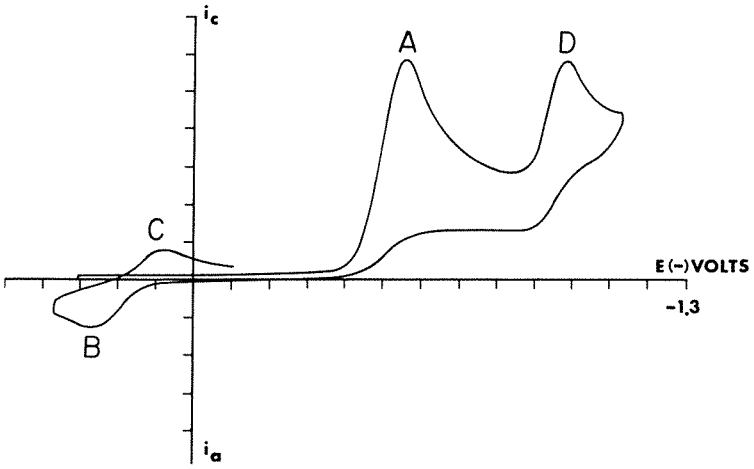
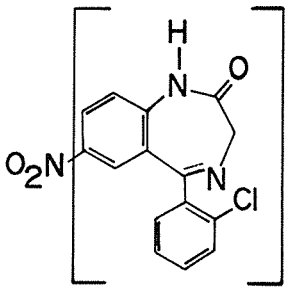
CV NOTES

CLONAZEPAM

CV I





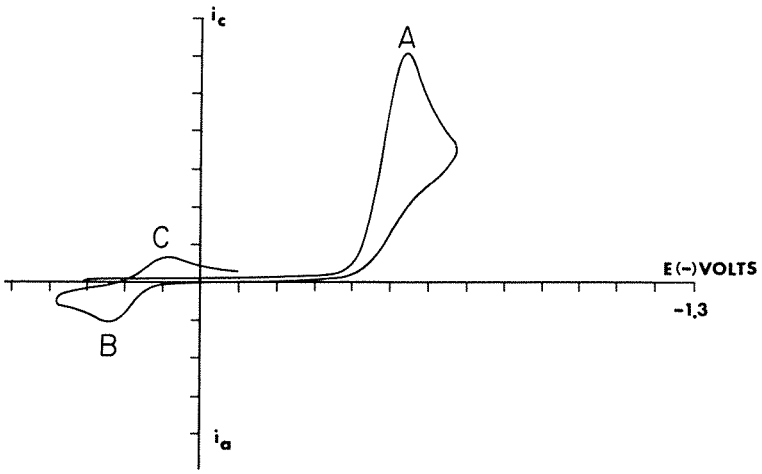
[ ]=R

A: $R-NO_2+4e+4H^+ \rightarrow R-\overset{H}{N}OH+H_2O$

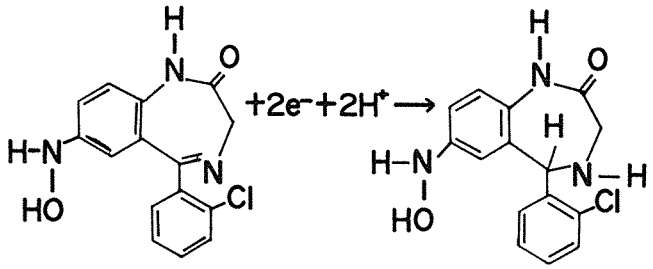
B: $R-\overset{H}{N}OH \rightarrow R-NO+2e+2H^+$

C: $R-NO+2e+2H^+ \rightarrow R-\overset{H}{N}OH$

CV II



D:



SAMPLE:	Clonazepam
MEDIUM:	70% 0.1M monochloroacetate, pH 3, 30% isopropyl alcohol
CONC.:	0.2 mg/mL
RATE:	100 mV/sec
ELECTRODE:	Glassy Carbon
REFERENCE:	RE-1, Ag/AgCl/3M KCl
MODEL:	CV-1A

Clonazepam, an anti-convulsant drug, demonstrates how molecules may have more than one electroactive moiety. Clonazepam contains a nitro and an imine; both are easily reduced (peaks A and D). If only the peak A reduction is carried out, the substance oxidized at B is still created (CVII). From this information, plus the known mechanism of nitro group electrochemistry, peak A is deduced to be the reduction of the nitro functionality, leaving D to be the imine reduction.

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