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A P P E N D I X

Code numbers of the anthraquinone

- C = Crude extract from leaves
- I<sub>1</sub> = Aloe-emodin anthraquinone genin
- a = Silica gel G/Benzene, Methyl alcohol = 9 + 1
- b = Silica gel G/Benzene, Ethylacetate, Acetic acid  
75 + 24 + 1
- c = Silica gel G/Petroleum b.p. 40° - 70°C, Ethylacetate,  
acetic acid 45 + 5 + 3
- d = Silica gel G/Di-isopropylether
- e = Silica gel G/Chloroform, Methyl alcohol 6 + 4



Detection

- (a) Ultraviolet light
- (b)  $\text{NH}_3$  vapour
- (c) 5% Alcoholic potash
- (d) 0.5% Magnesium acetate in methyl alcohol

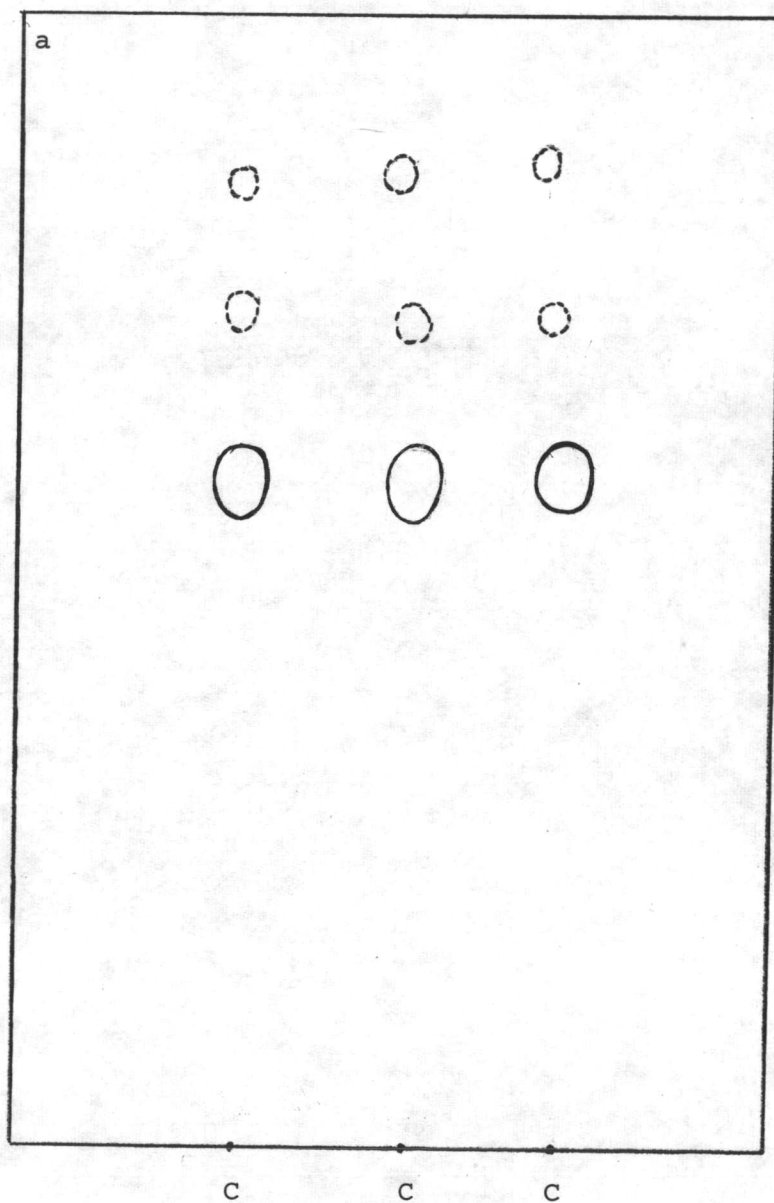


Figure 1. Thin layer chromatography of anthraquinones from the leaves of *Cassia garrettiana* Craib

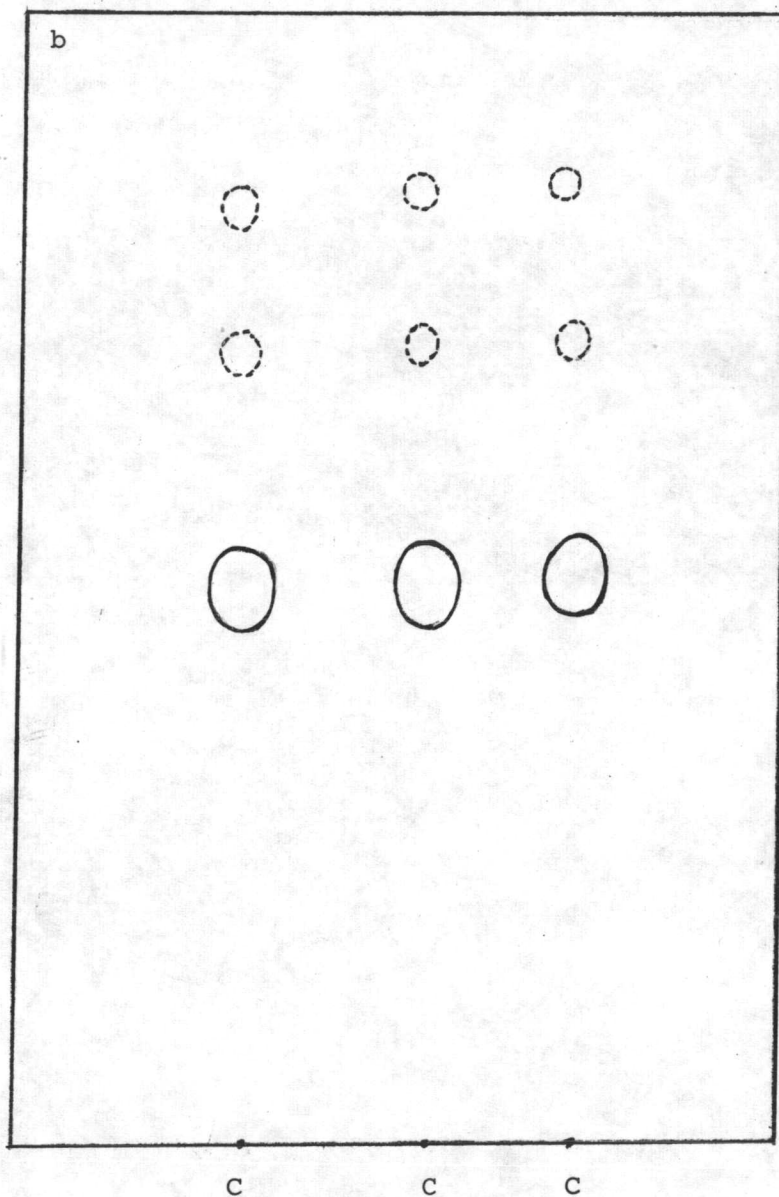


Figure 2. Thin layer chromatography of anthraquinones from the leaves of *Cassia garrettiana* Craib

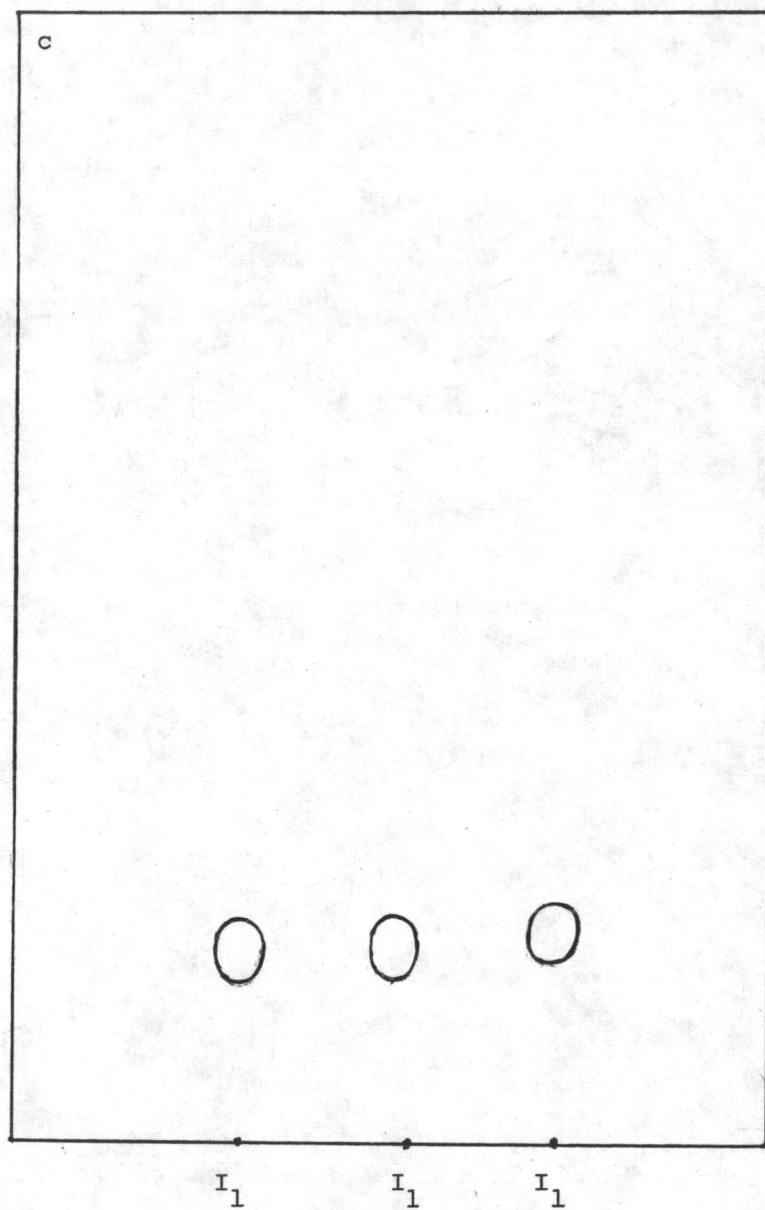


Figure 3. Thin layer chromatography of anthraquinone  $I_1$  from the leaves of *Cassia garrettiana* Craib

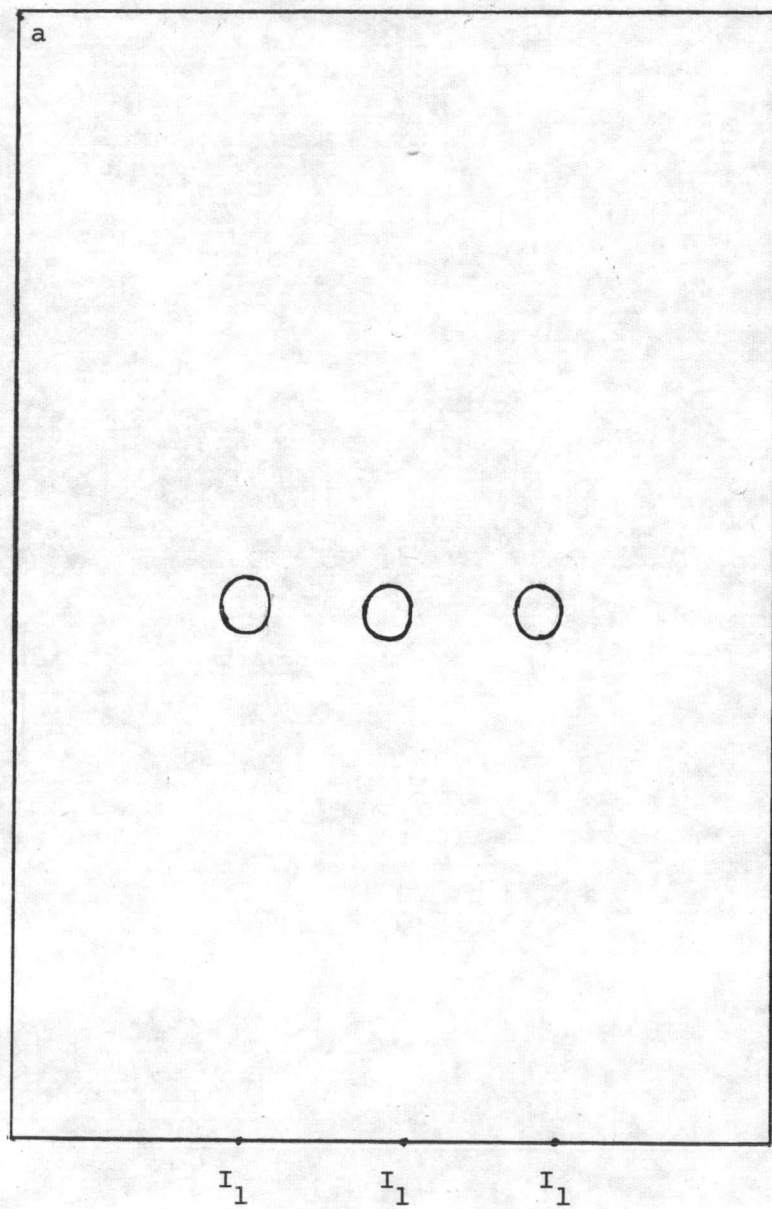


Figure 4. Thin layer chromatography of anthraquinone  $I_1$  from the leaves of *Cassia garrettiana* Craib

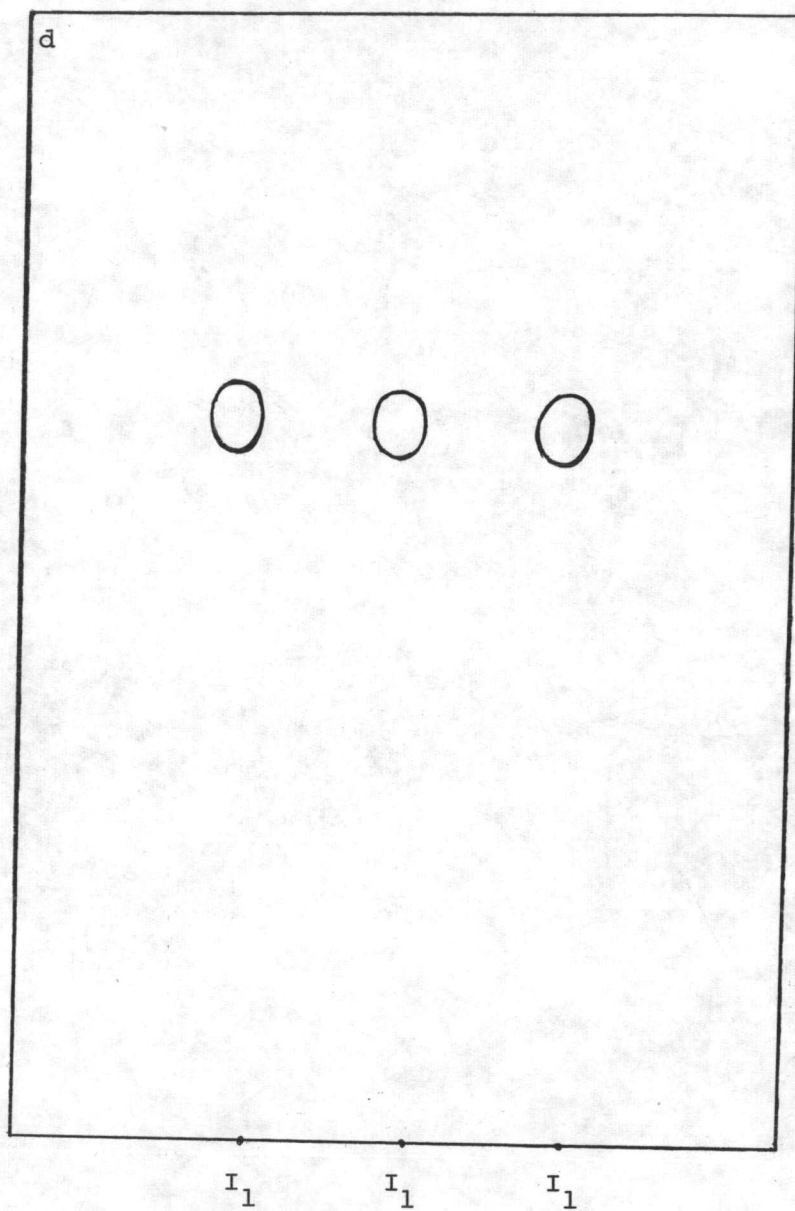


Figure 5. Thin layer chromatography of anthraquinone  $I_1$  from the leaves of *Cassia garrettiana* Craib

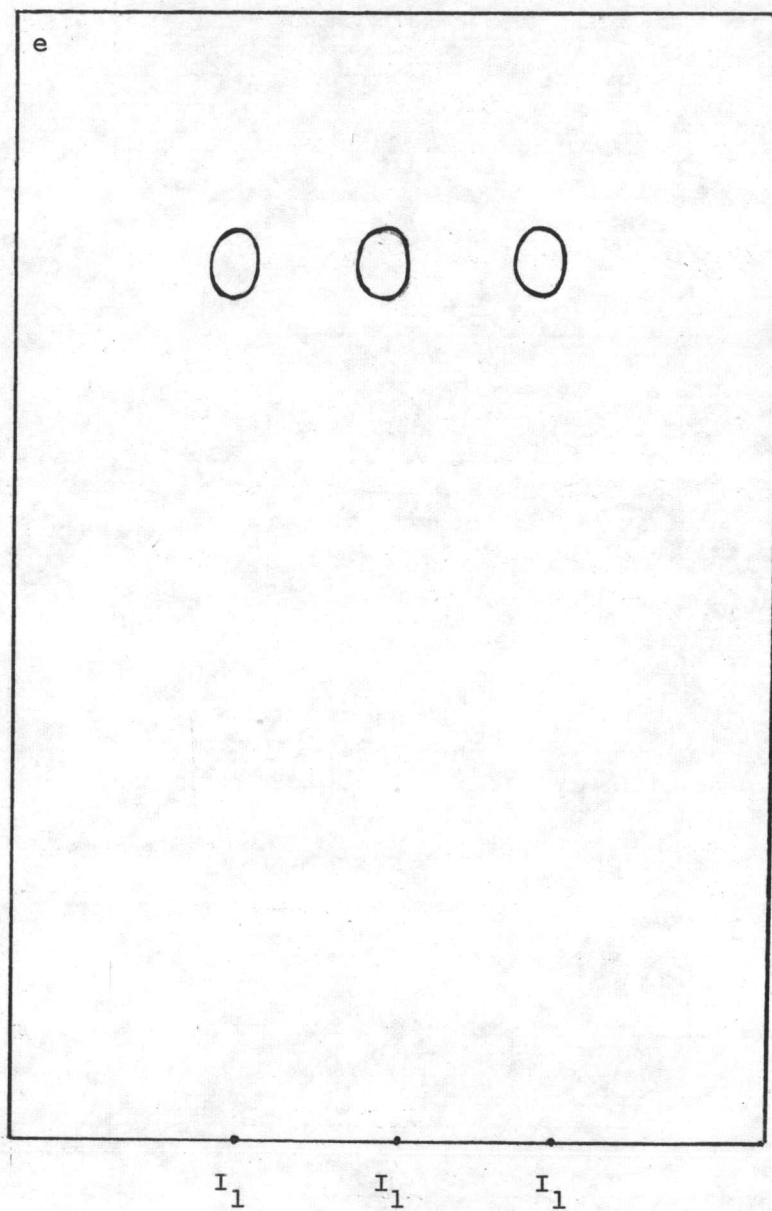
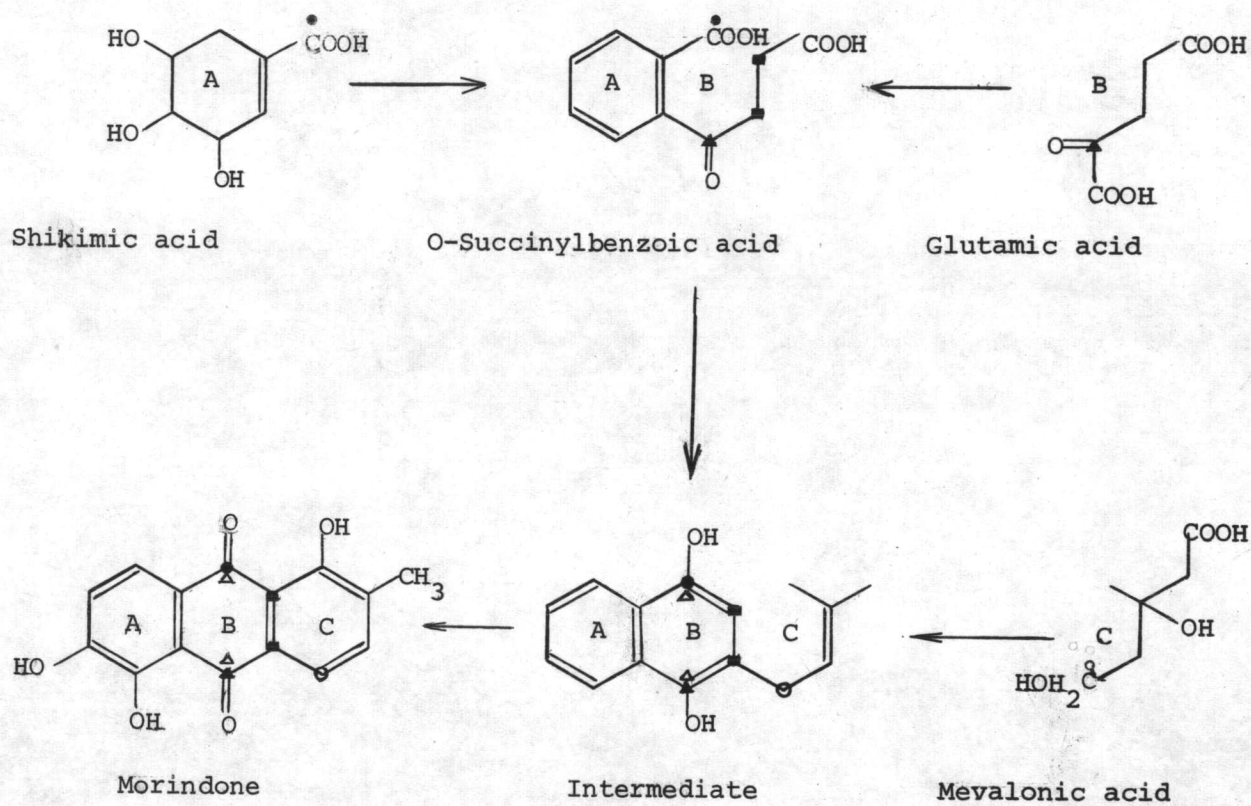


Figure 6. Thin layer chromatography of anthraquinone  $I_1$  from the leaves of *Cassia garrettiana* Craib



Scheme c Migration of radioactivity from different precursors  
to morindone



- ▲  $\alpha$ -Ketoglutaric acid
- O-Succinylbenzoic acid
- Mevalonic acid
- △ 2-( $\gamma,\gamma$ -Dimethylallyl)-naphthoquinone
- Shikimic acid



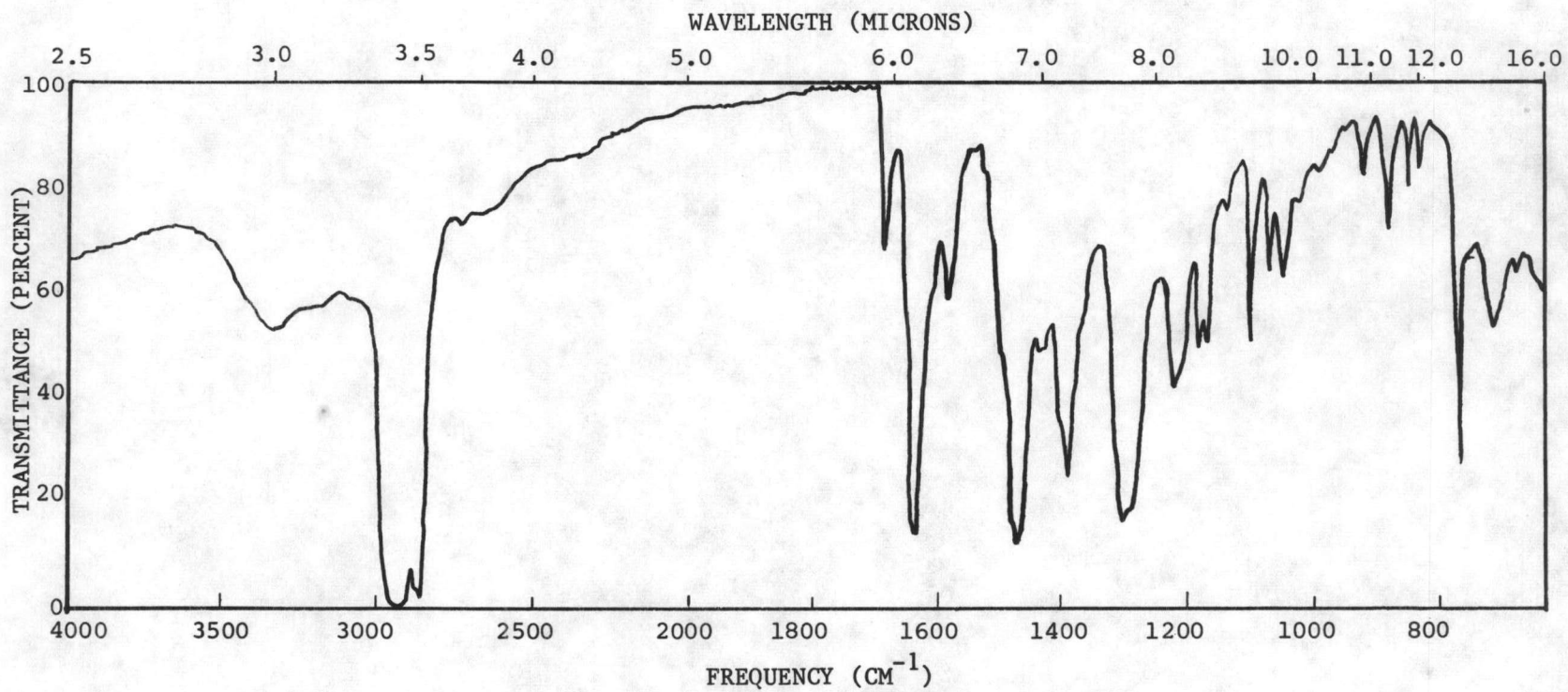
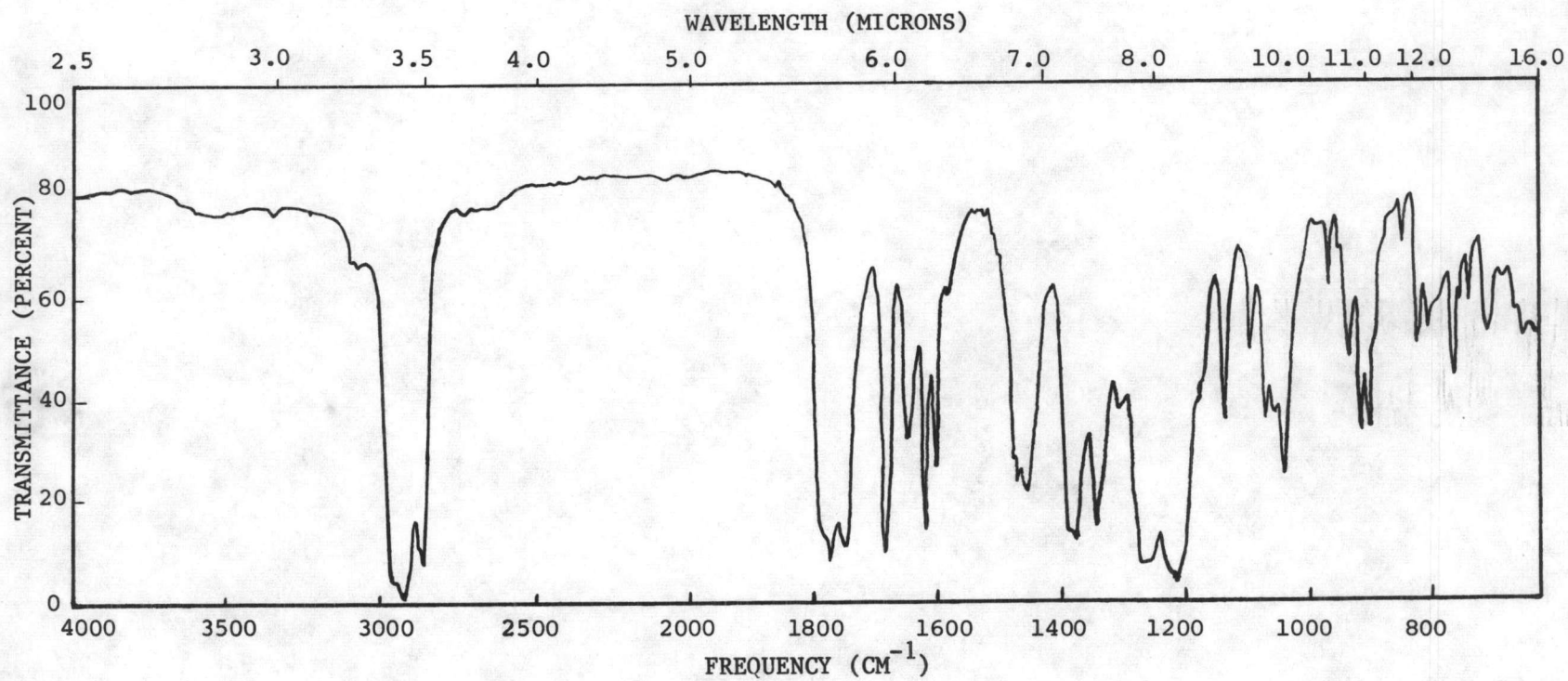


Figure 8. Infrared absorption spectrum of anthraquinone I<sub>1</sub> from the leaves of *Cassia garrettiana* Craib in Nujol.



**Figure 9.** Infrared absorption spectrum of acetate derivative of anthraquinone I<sub>1</sub> from the leaves of *Cassia garrettiana* Craib in Nujol.

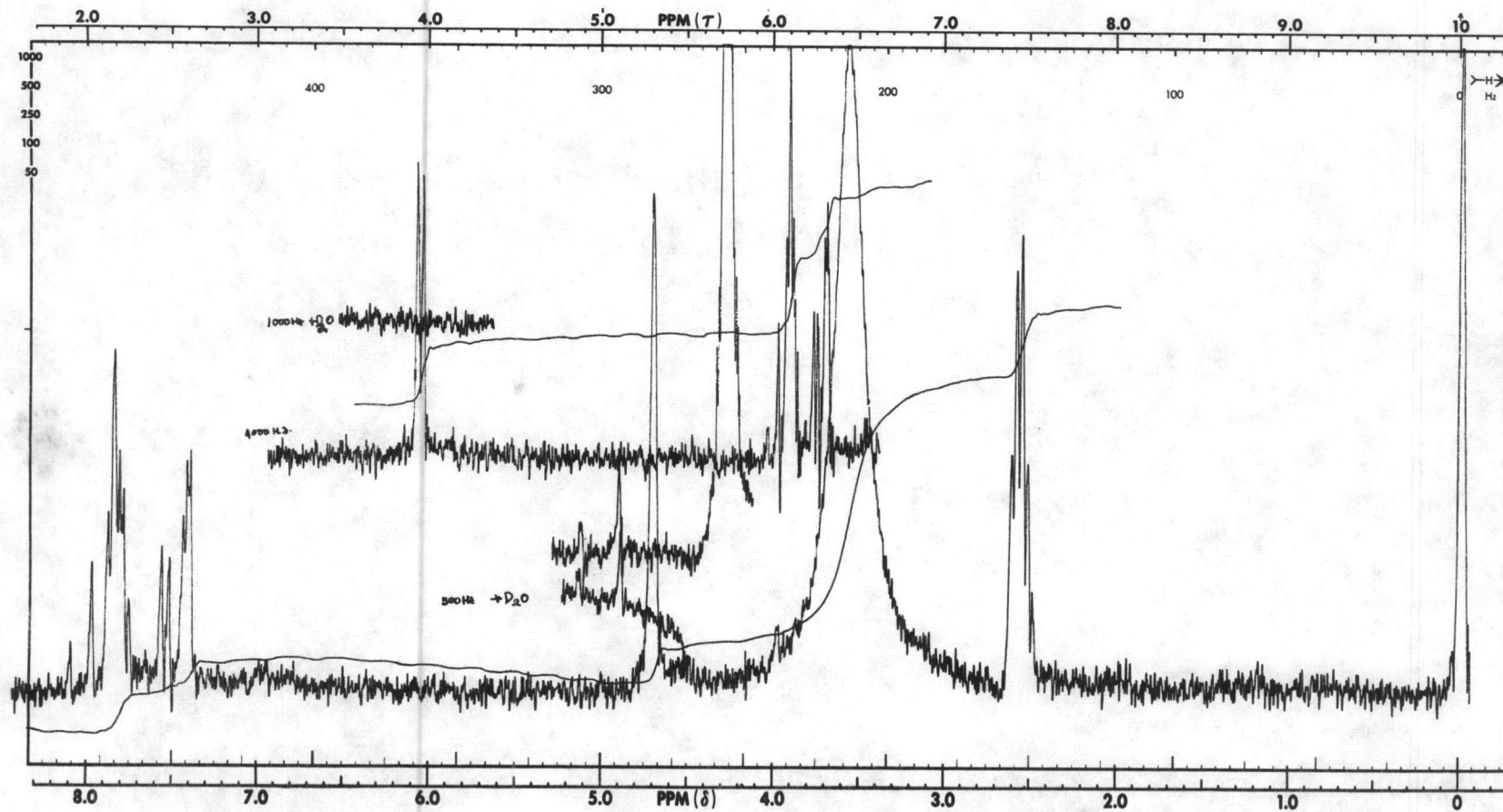


Figure 10. NMR spectrum of anthraquinone I<sub>1</sub> from the leaves of *Cassia garrettiana* Craib in DMSO.

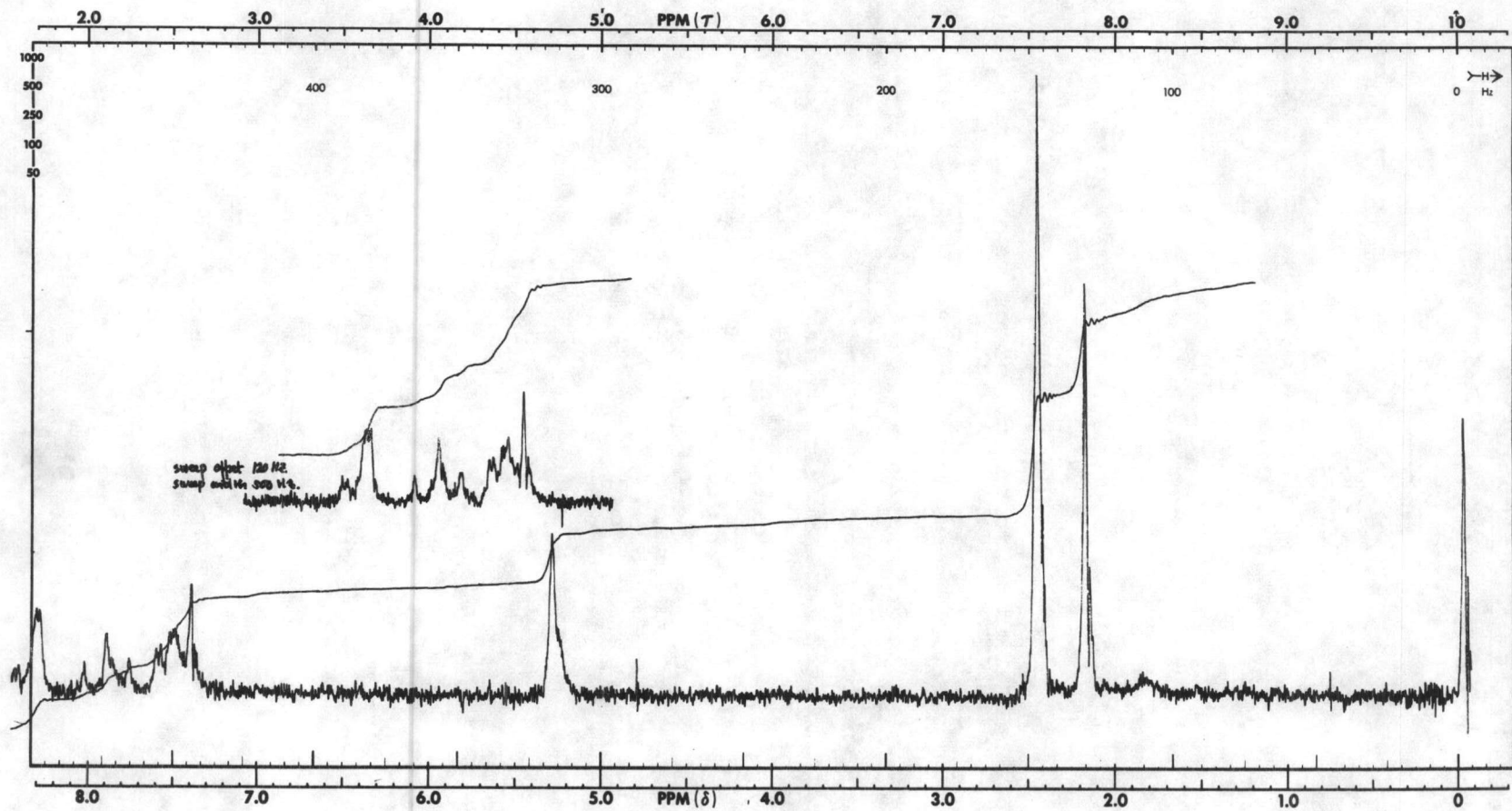


Figure 11. NMR spectrum of acetate derivative of anthraquinone I<sub>1</sub> from the leaves of  
*Cassia garrettiana* Craib in CDCl<sub>3</sub>

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