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# A P P E N D I X

Code of materials used in the experiment.

| | | |
|---|---|---|
| Ca | = | Crude extract of *Cassia grandis* L. leaves |
| Cc | = | Crude extract of *C. timoriensis* DC. leaves |
| A | = | Authentic aloe-emodin |
| $A_1$ | = | Aloe-emodin isolated from the leaves of *C. grandis* L. |
| $A_1$-acetate | = | Acetate derivative of aloe-emodin isolated from the leaves of *C. grandis* L. |
| B | = | Authentic barakol |
| $B_1$ | = | Barakol isolated from the leaf-extract of *C. timoriensis* DC. |

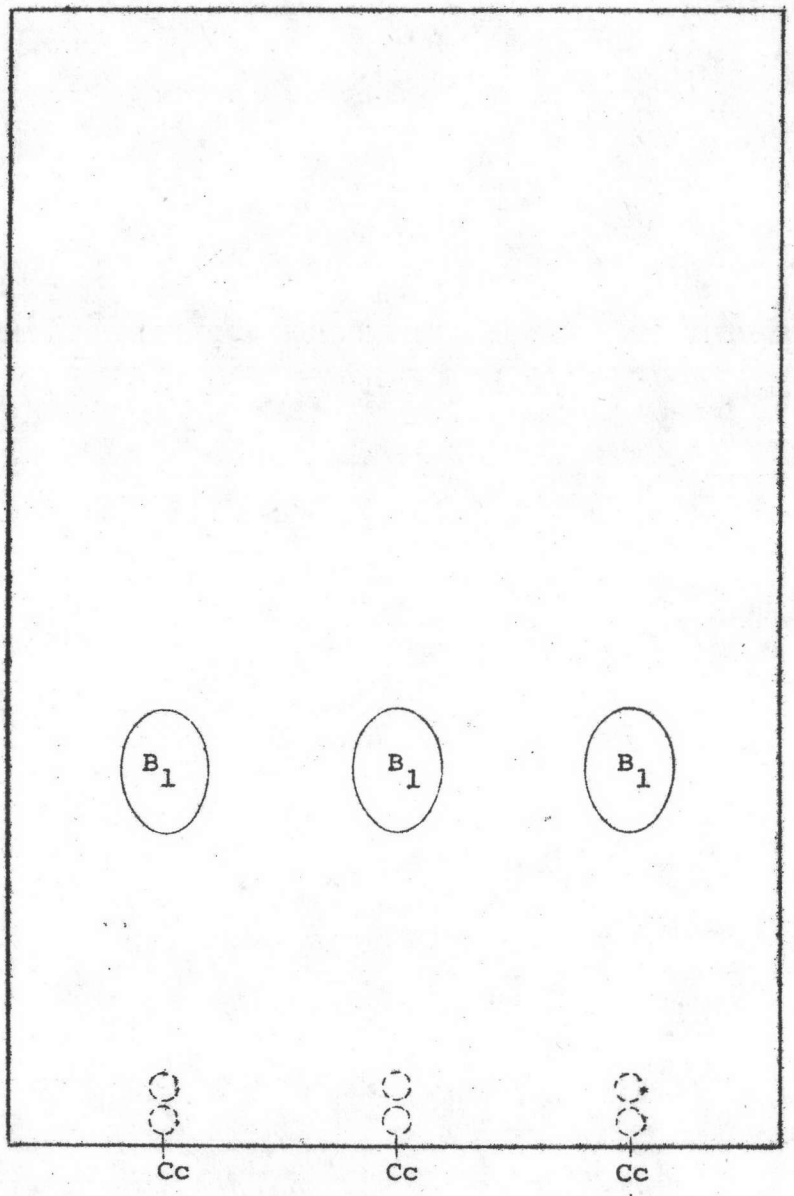


Figure 8 Thin layer chromatogram of crude extract of *Cassia timoriensis* DC. leaves.
(Silica gel G/Chloroform, methanol 9+1)

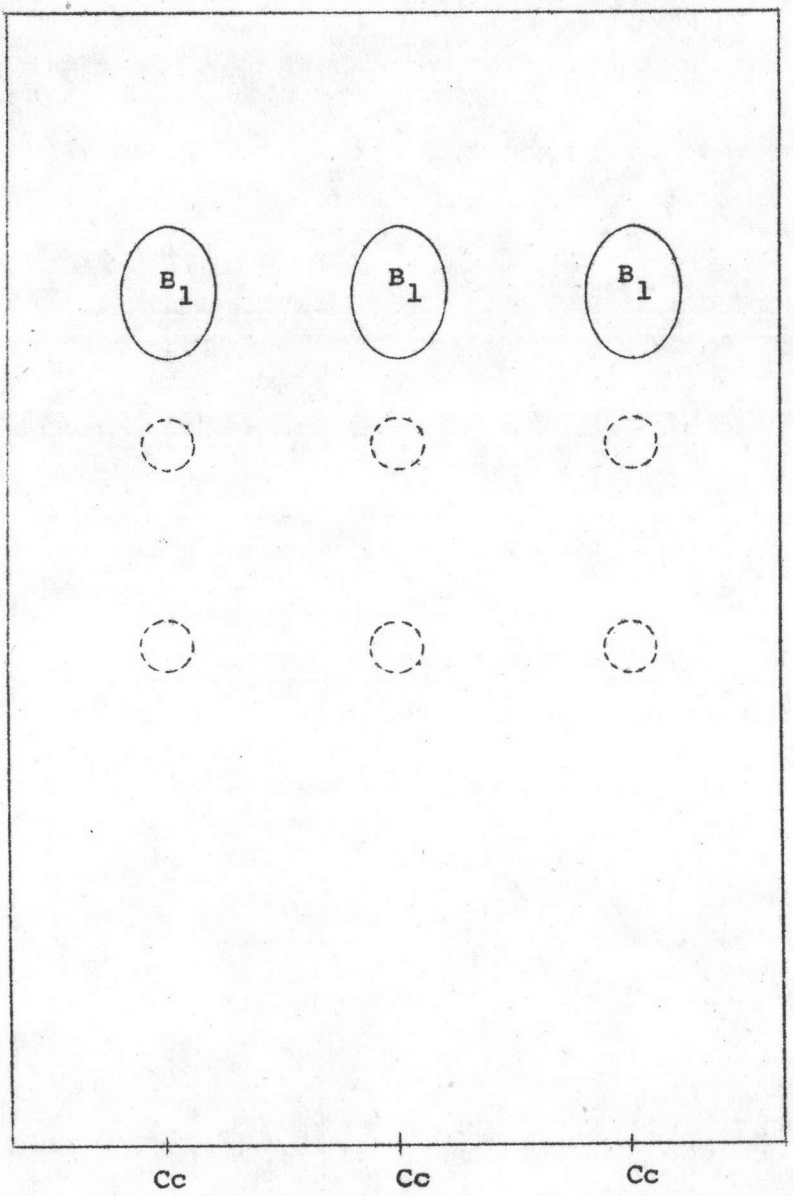


Figure 9 Thin layer chromatogram of crude extract of *Cassia timoriensis* DC. leaves.

(Silica gel G/Chloroform, methanol 6+4)

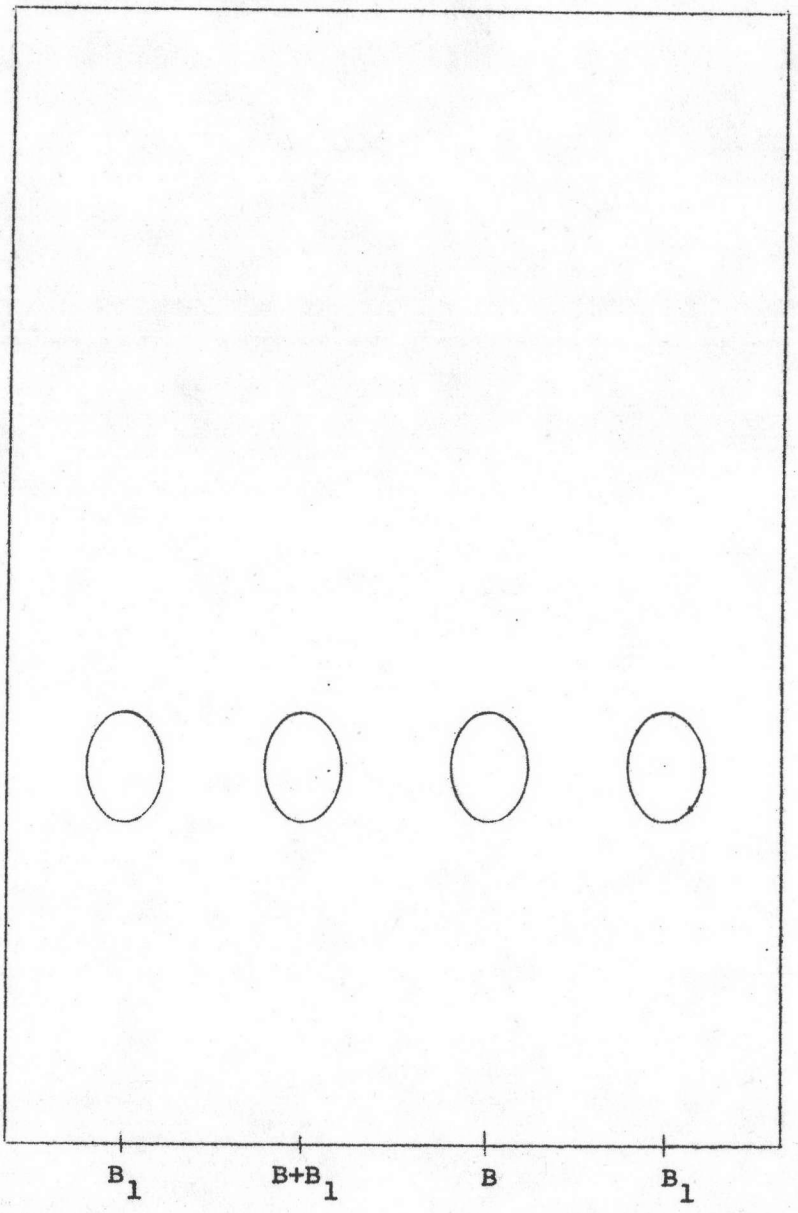


Figure 10 Thin layer chromatogram of $B_1$, of authentic barakol, and of the mix of them.

(Silica gel G/Chloroform, methanol 9+1)

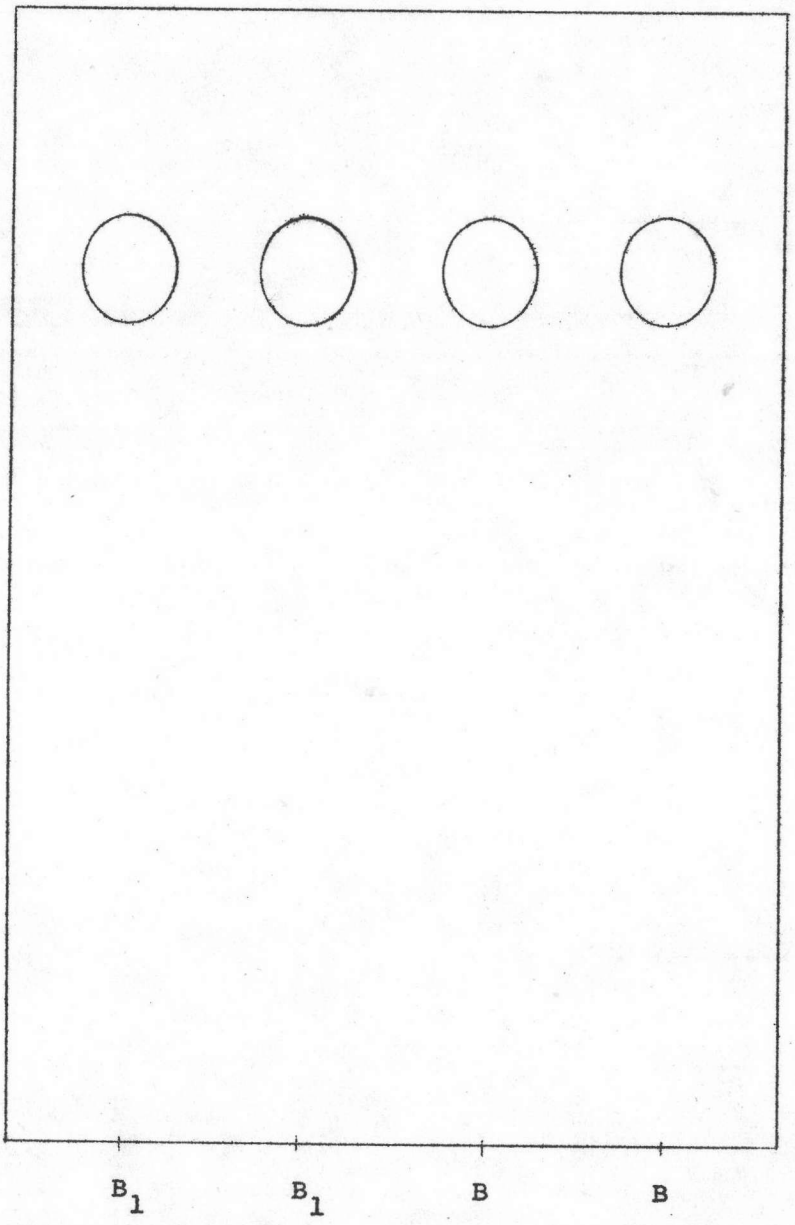


Figure 11 Thin layer chromatogram of $B_1$ and of authentic barakol.

(Silica gel G/Chloroform, methanol 6+4)

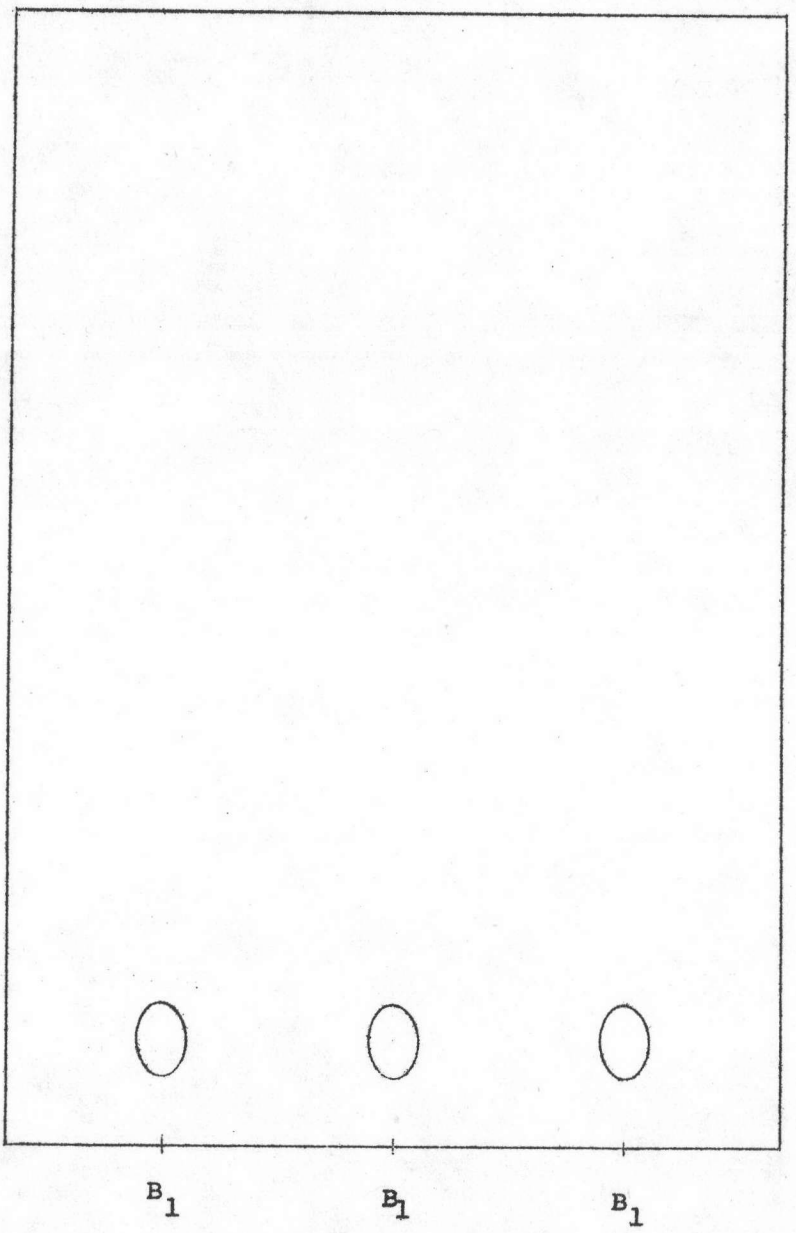


Figure 12 Thin layer chromatogram of $B_1$

(Silica gel G/Butanol, acetic acid, water 4+1+1)

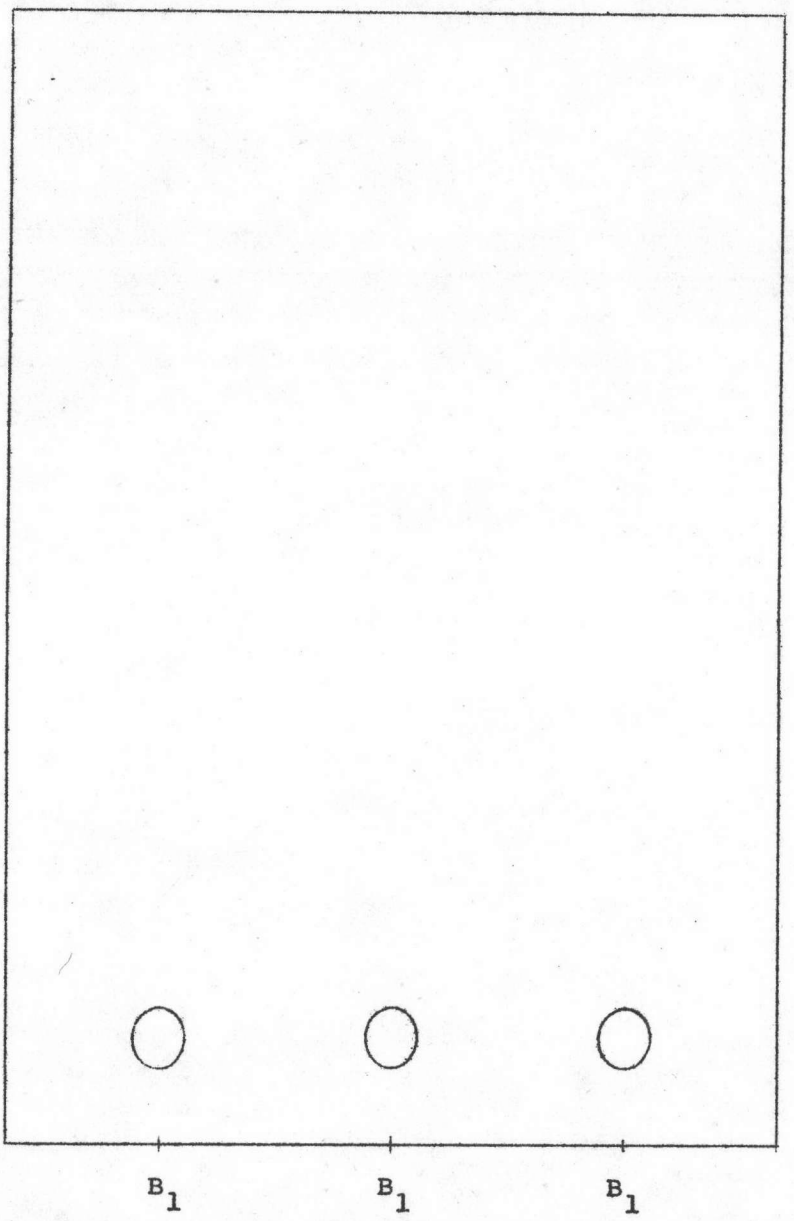


Figure 13 Thin layer chromatogram of $B_1$

(Silica gel G/Benzene, methanol 9+1)

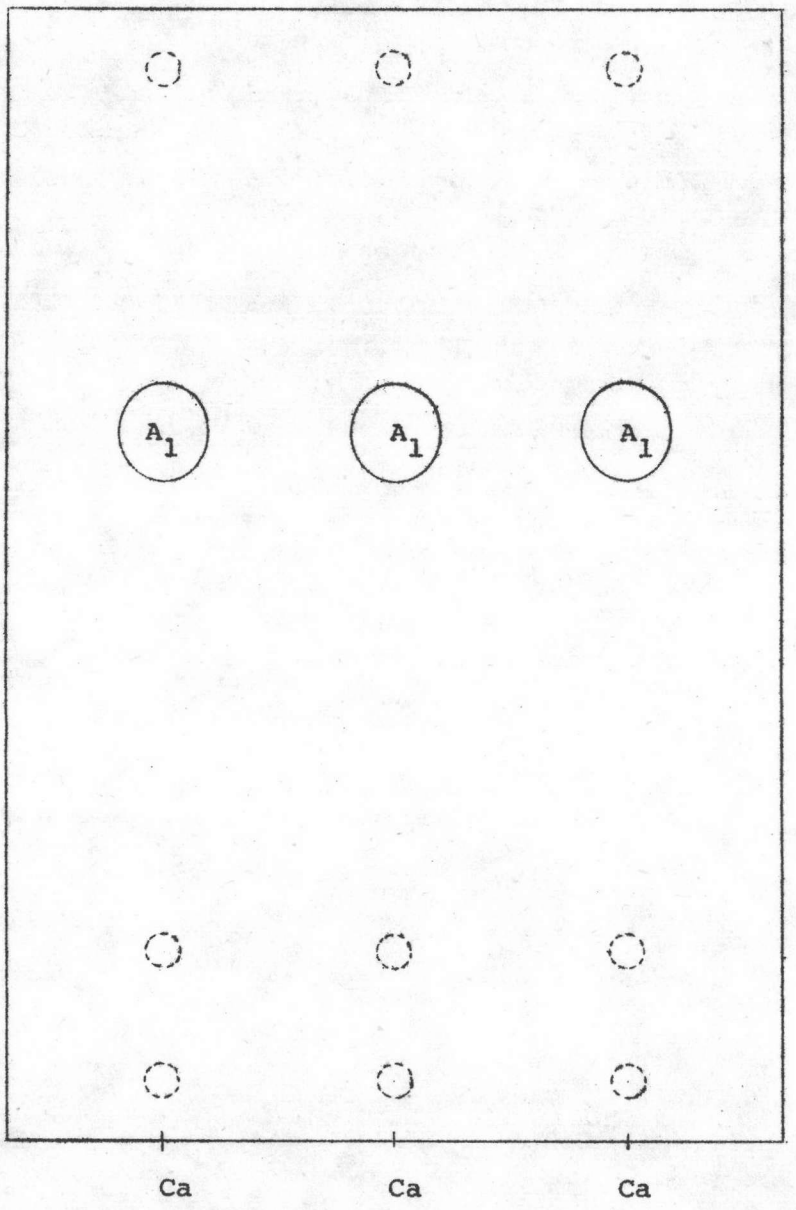


Figure 14 Thin layer chromatogram of crude extract of *Cassia grandis* L. leaves.

(Silica gel G/Benzene, methanol 9+1)

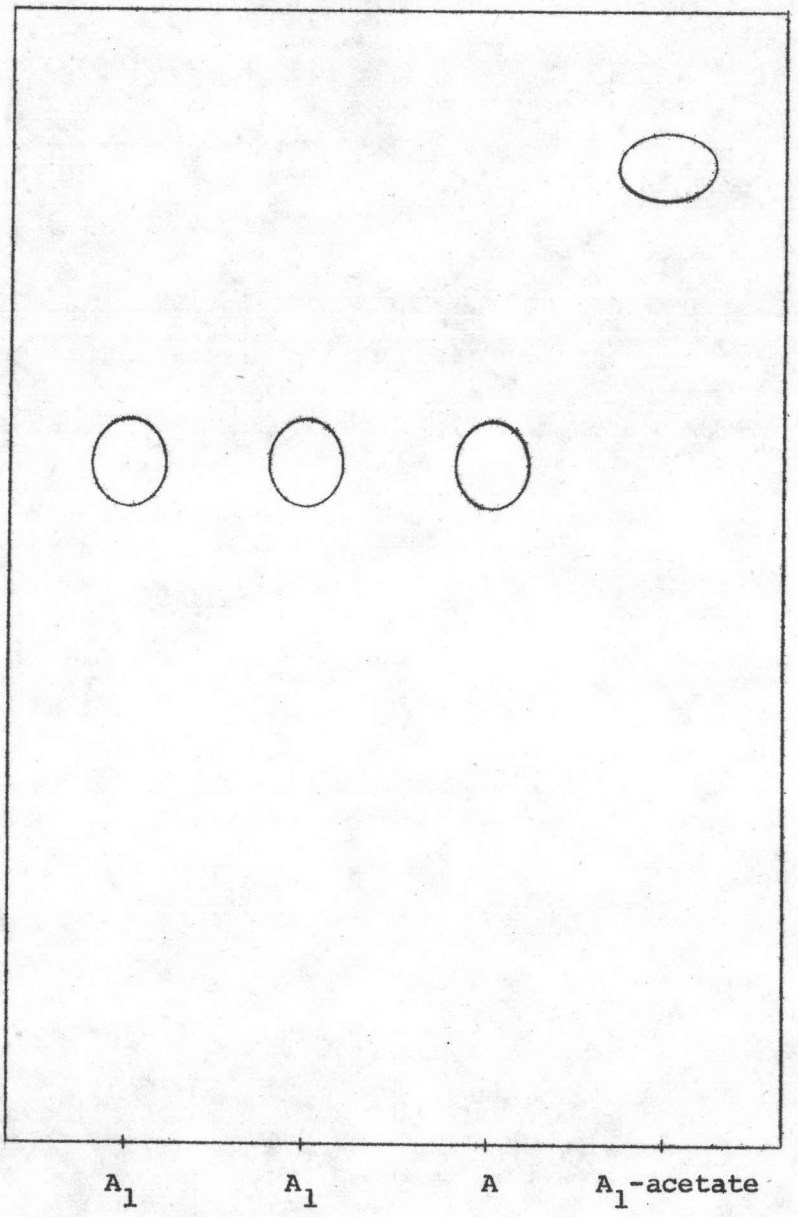


Figure 15 Thin layer chromatogram of $A_1$, of $A_1$-acetate, and of authentic aloe-emodin.

(Silica gel G/Benzene, methanol 9+1)

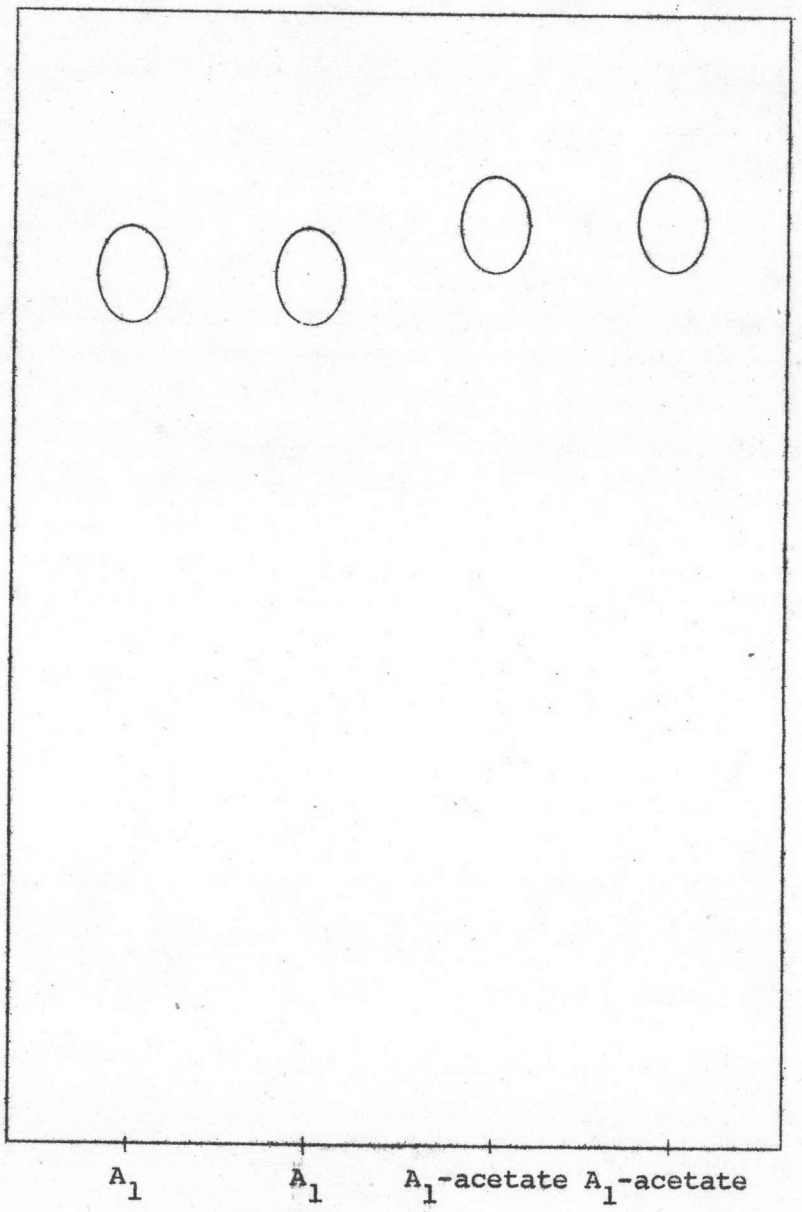


Figure 16 Thin layer chromatogram of $A_1$ and $A_1$-acetate.

(Silica gel G/Chloroform, methanol 6+4)

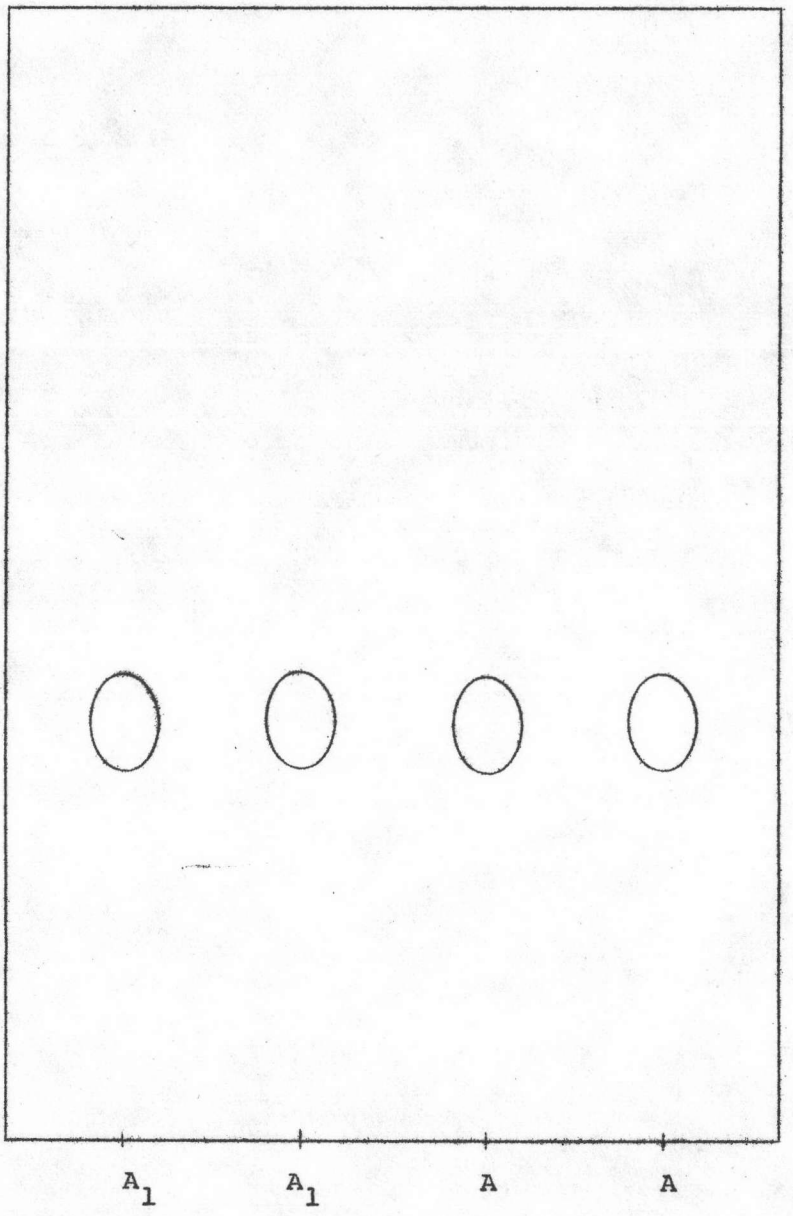


Figure 17 Thin layer chromatogram of $A_1$ and of authentic aloe-emodin.

(Silica gel G/Di-isopropyl ether)

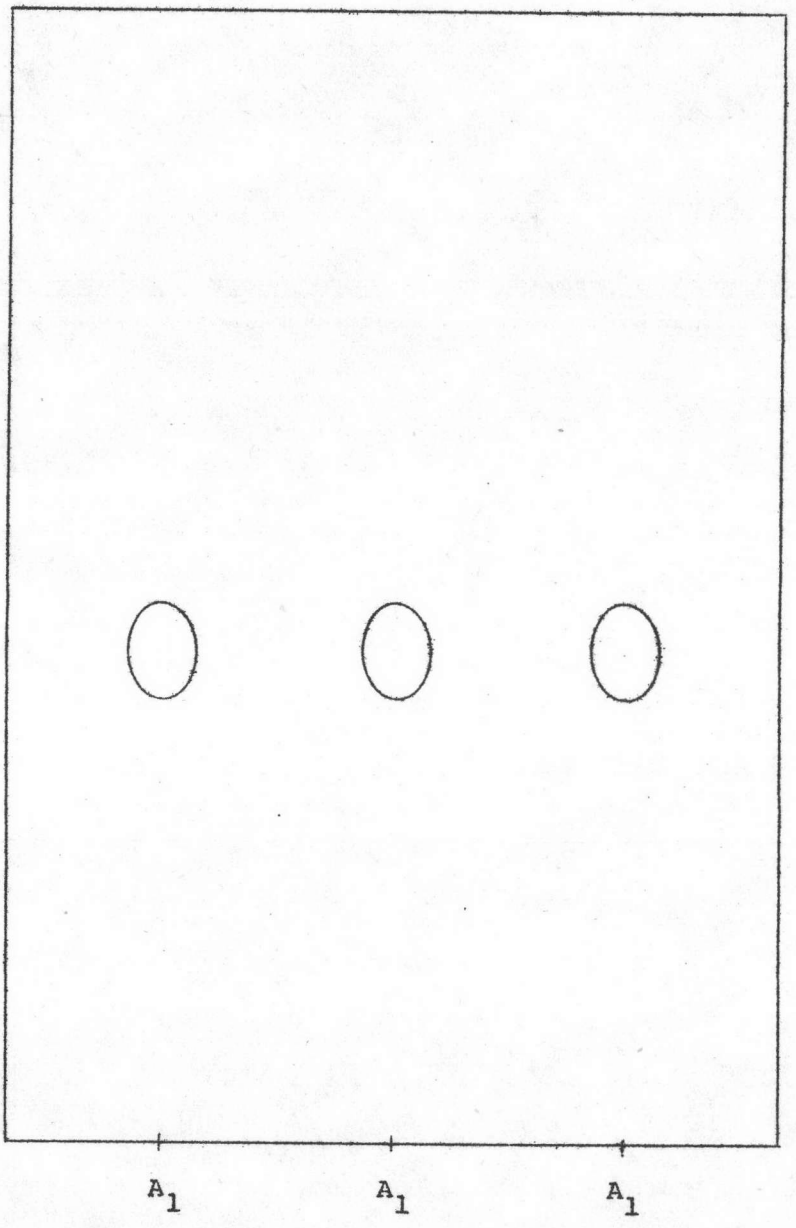


Figure 18 Thin layer chromatogram of $A_1$.

(Silica gel G/Benzene, ethyl acetate, acetic acid 75+24+1)

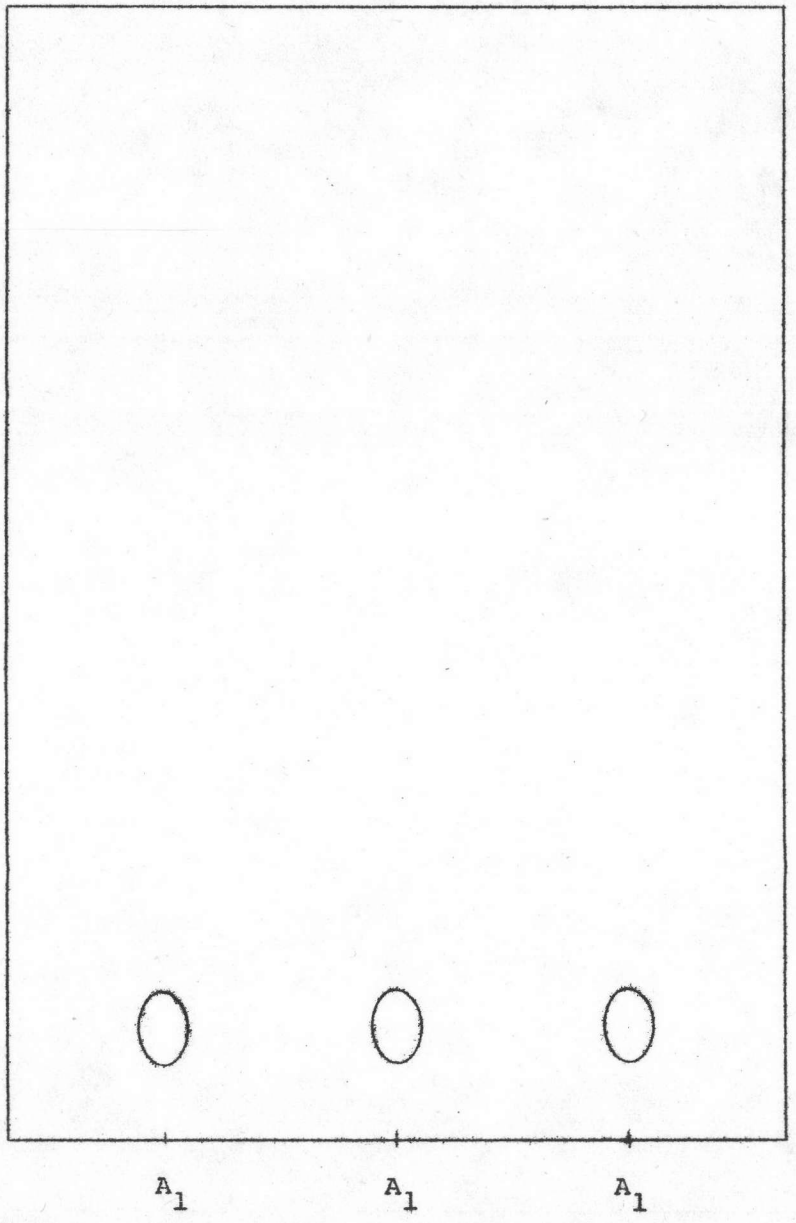


Figure 19 Thin layer chromatogram of $A_1$.
(Silica gel G/Petroleum ether b.p. 40°-60°C,
ethyl acetate, acetic acid 45+5+3)

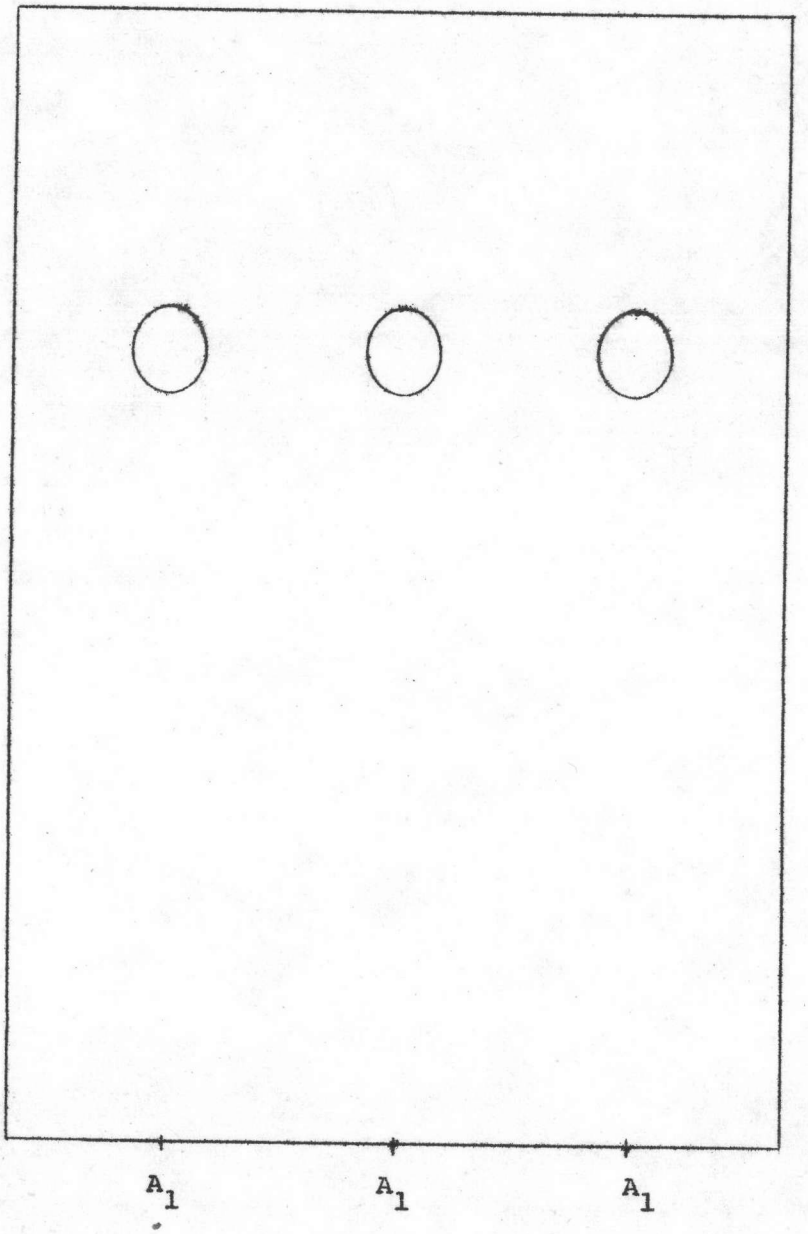


Figure 20 Thin layer chromatogram of $A_1$.

(Silica gel G/Butanol, acetic acid, water 4+1+1)

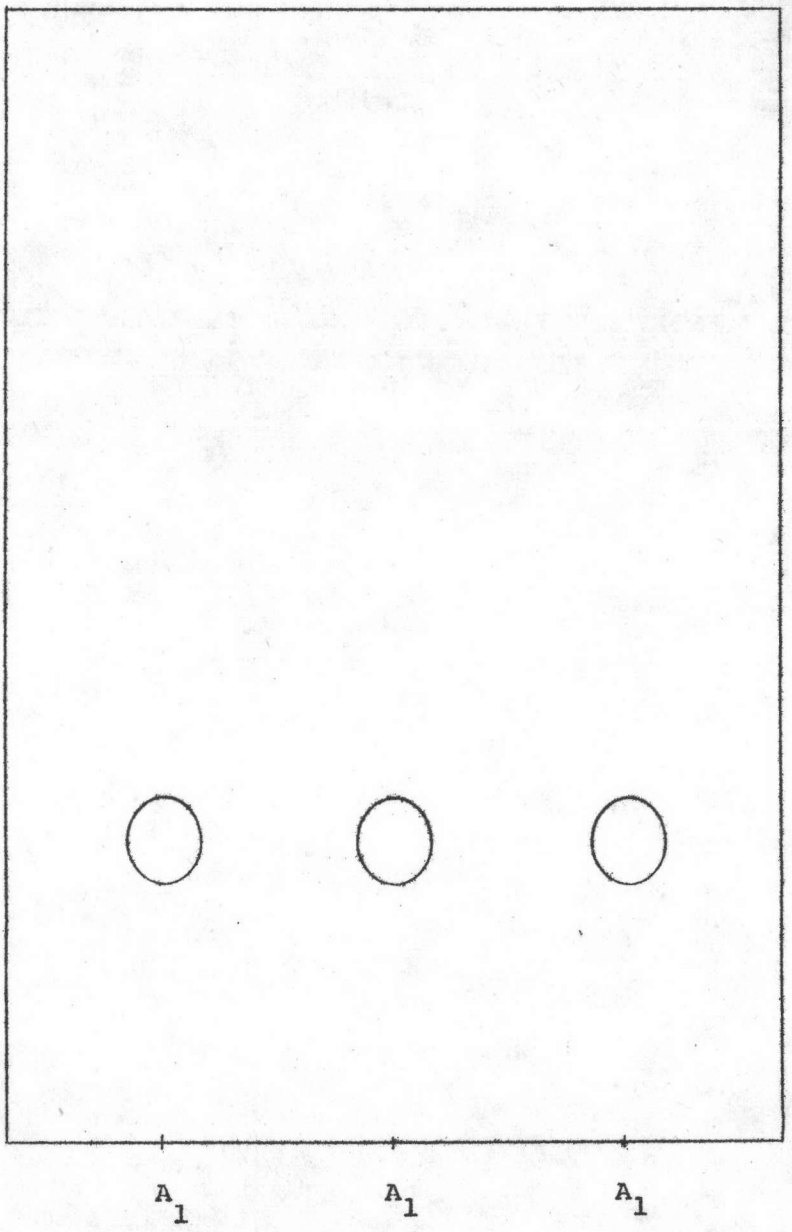


Figure 21 Thin layer chromatogram of $A_1$.

(Silica gel G/Benzene, ethyl acetate 4+1)

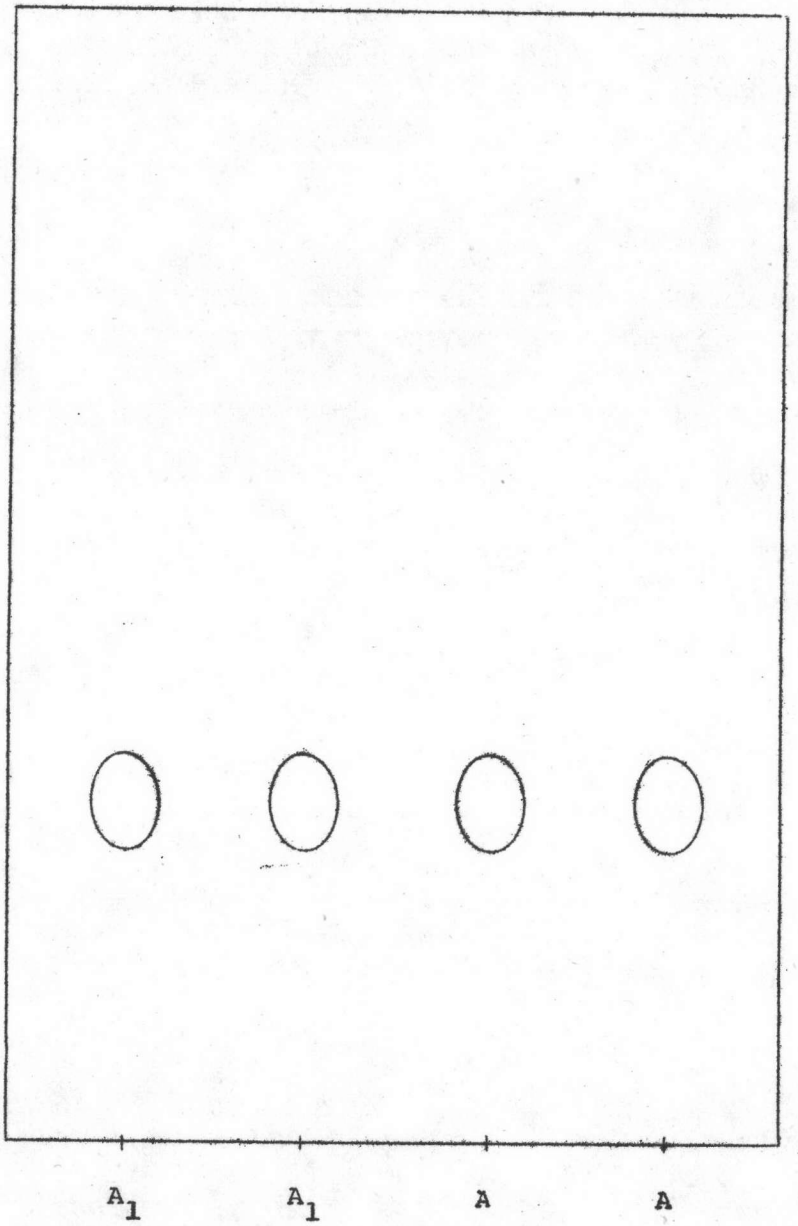


Figure 22 Thin layer chromatogram of $A_1$ and of authentic aloe-emodin.

(Silica gel G/Acetone, chloroform 5+95).

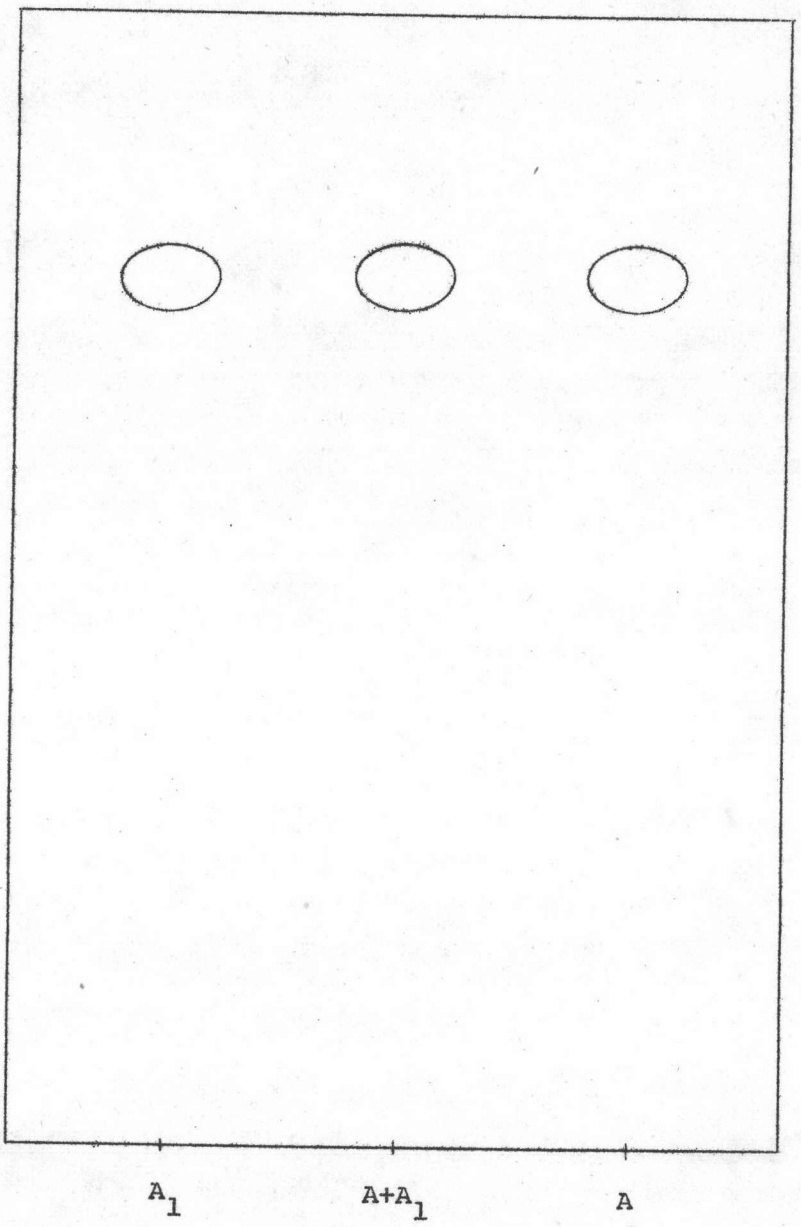


figure 23 Thin layer chromatogram of $A_1$, of authentic aloe-emodin, and of the mix of them.
(Silica gel G/Chloroform, methanol 9+1)

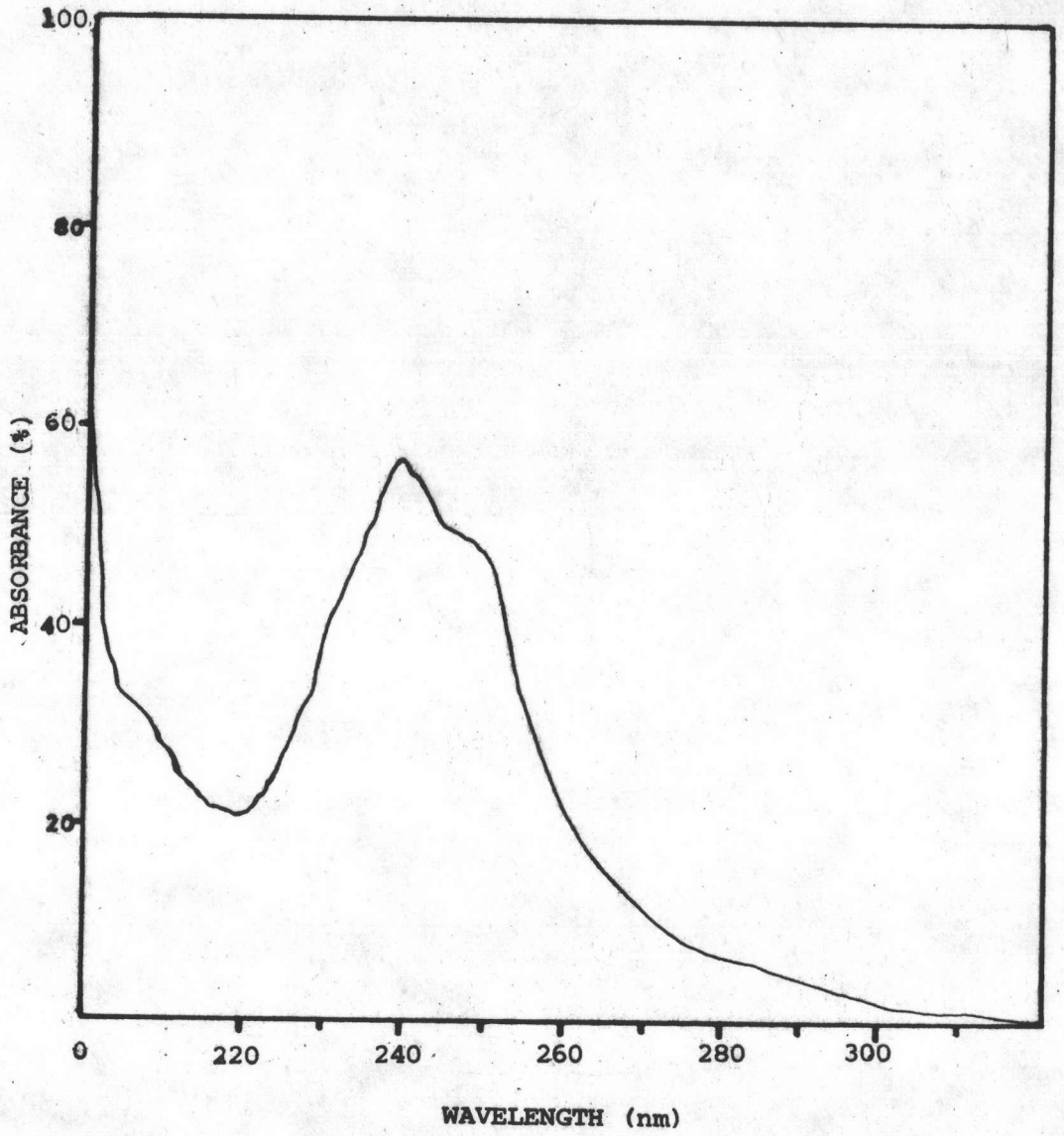


Figure 24 Ultraviolet absorption spectrum of $B_1$ in ethanol.

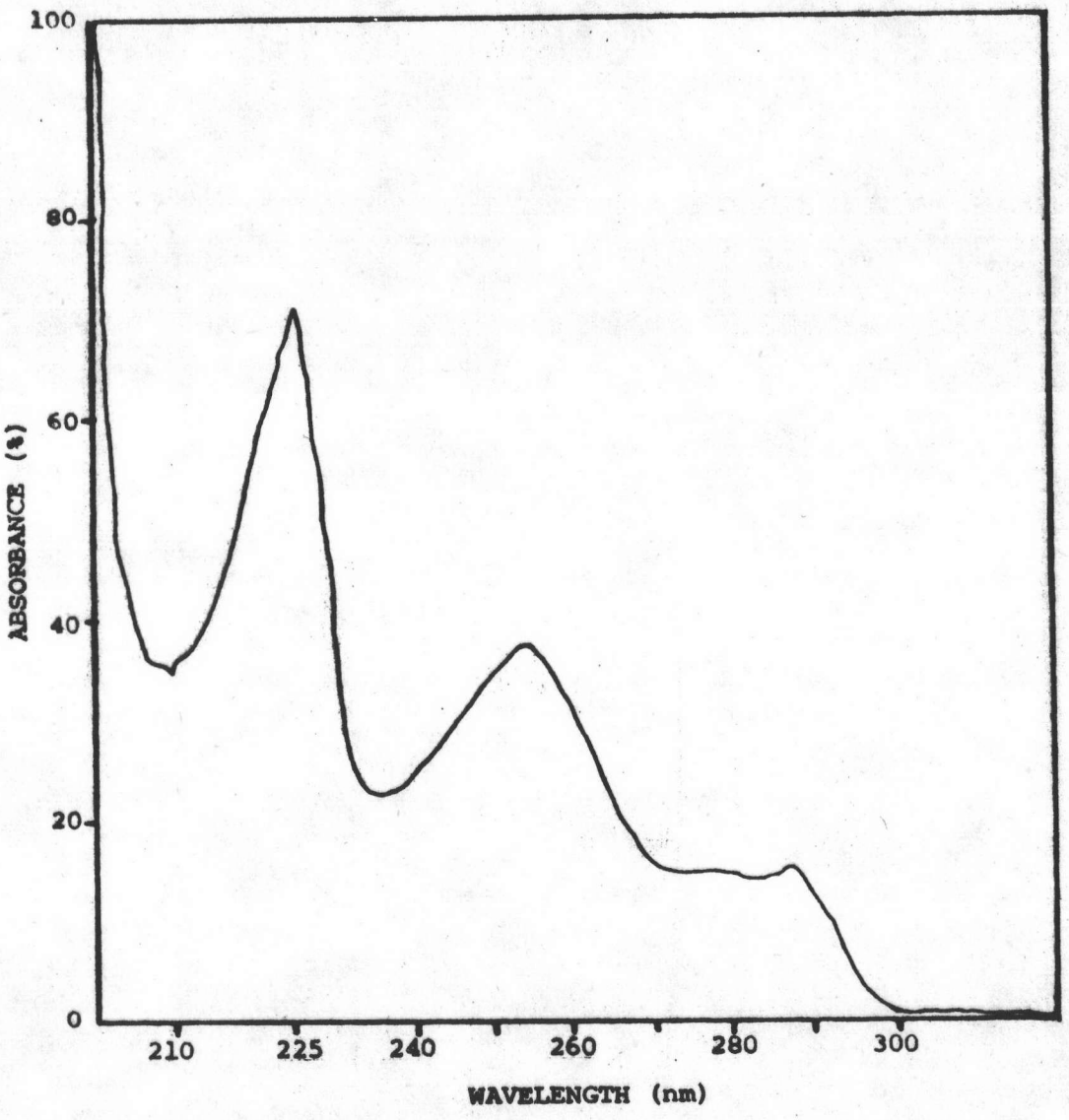


Figure 25 Ultraviolet absorption spectrum of $A_1$ in ethanol.

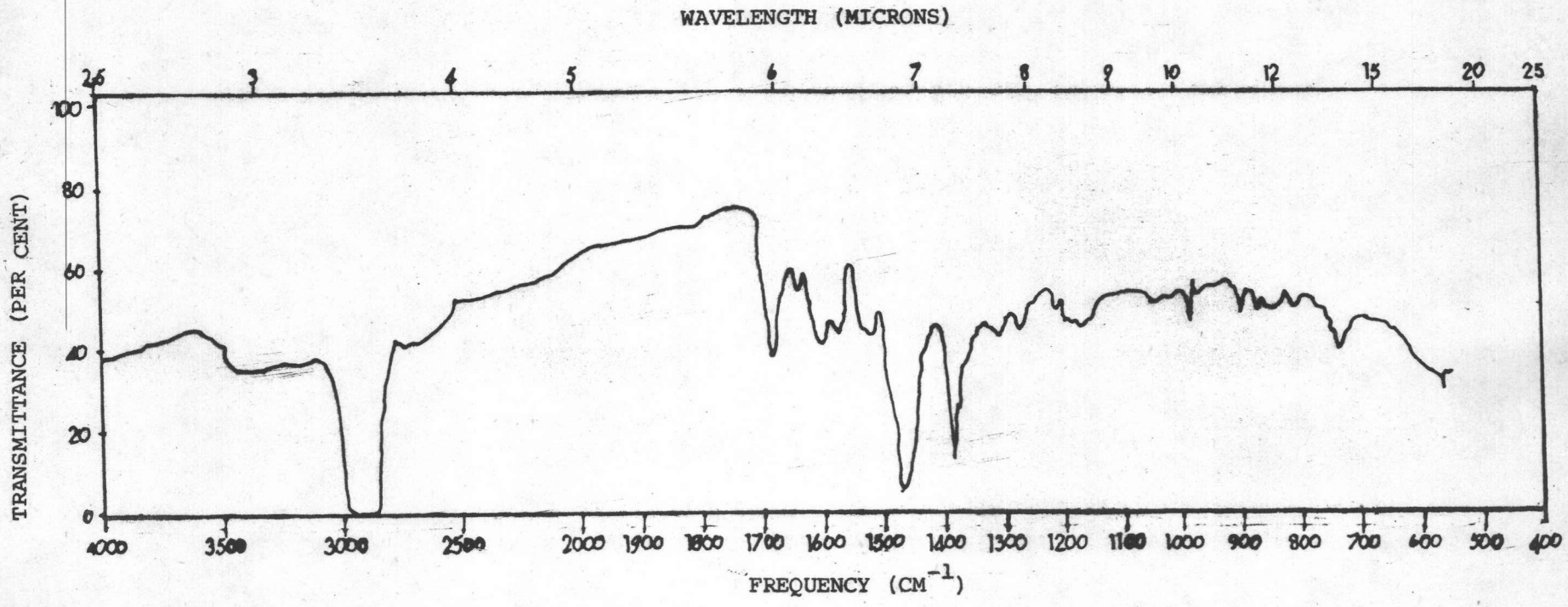


Figure 26 Infrared absorption spectrum of $B_1$ in Nujol.

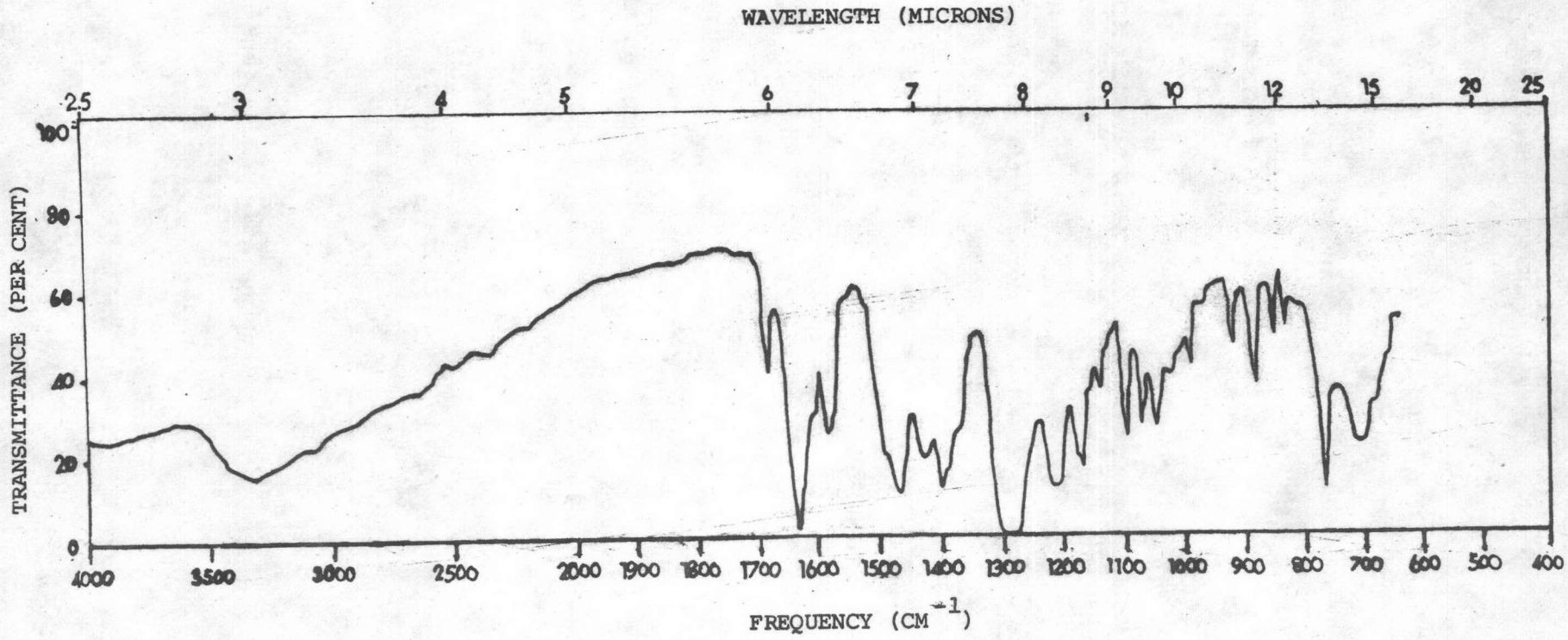


Figure 27 Infrared absorption spectrum of $A_1$ in KBr disc.

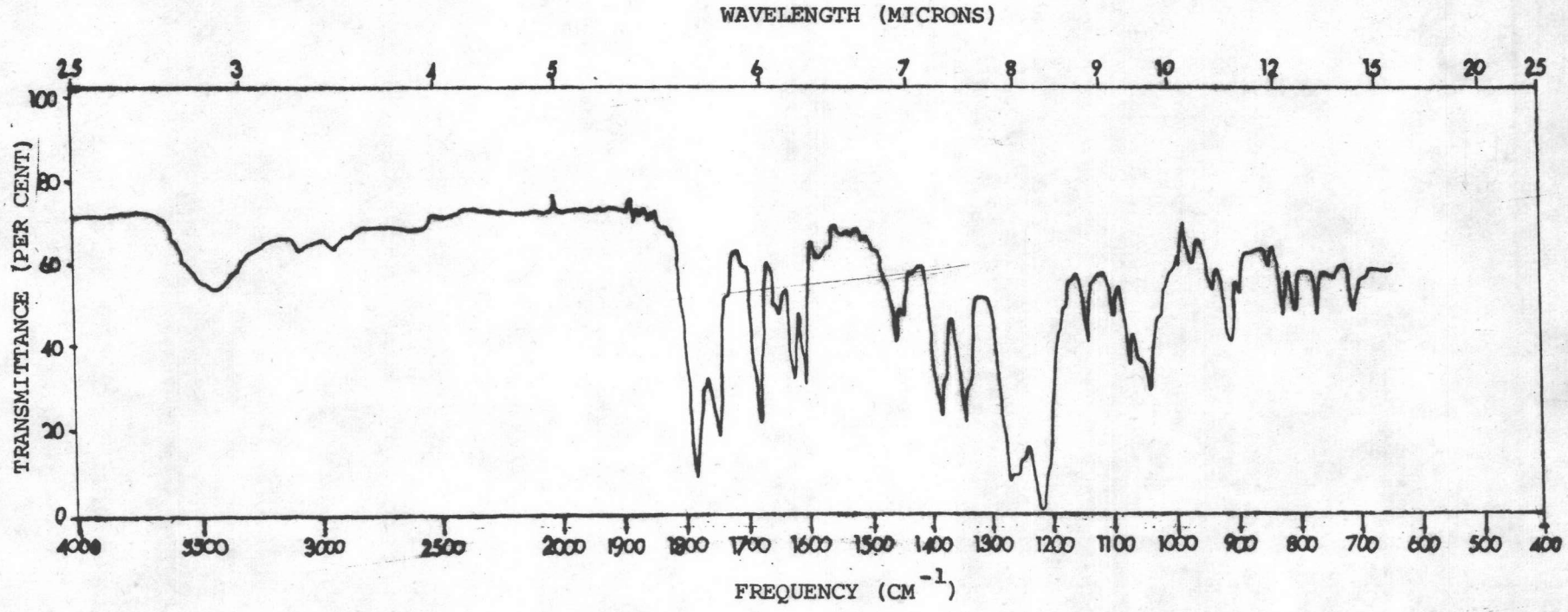


Figure 28 Infrared absorption spectrum of acetate derivative of $A_1$ in KBr disc.

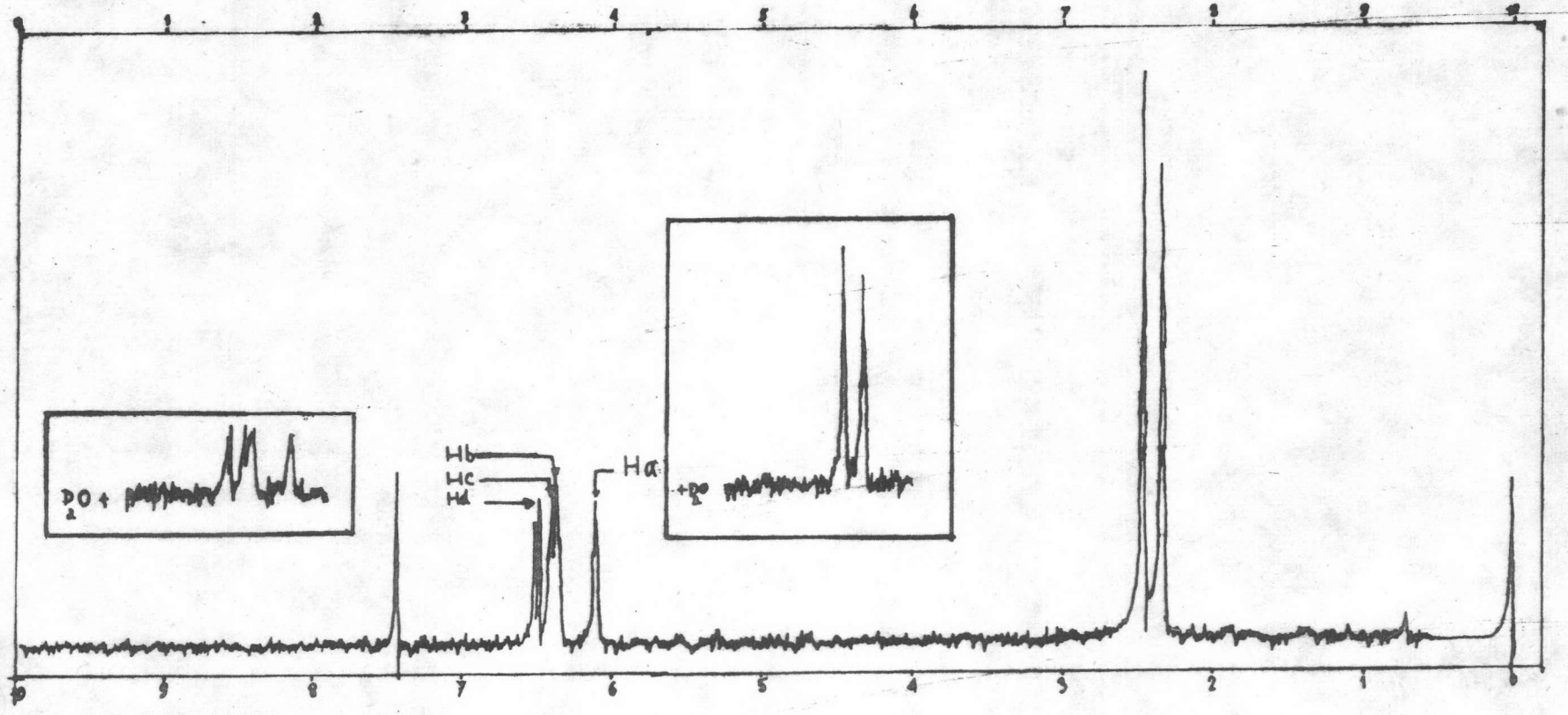


Figure 29 NMR spectrum of $B_1$ in $CDCl_3$

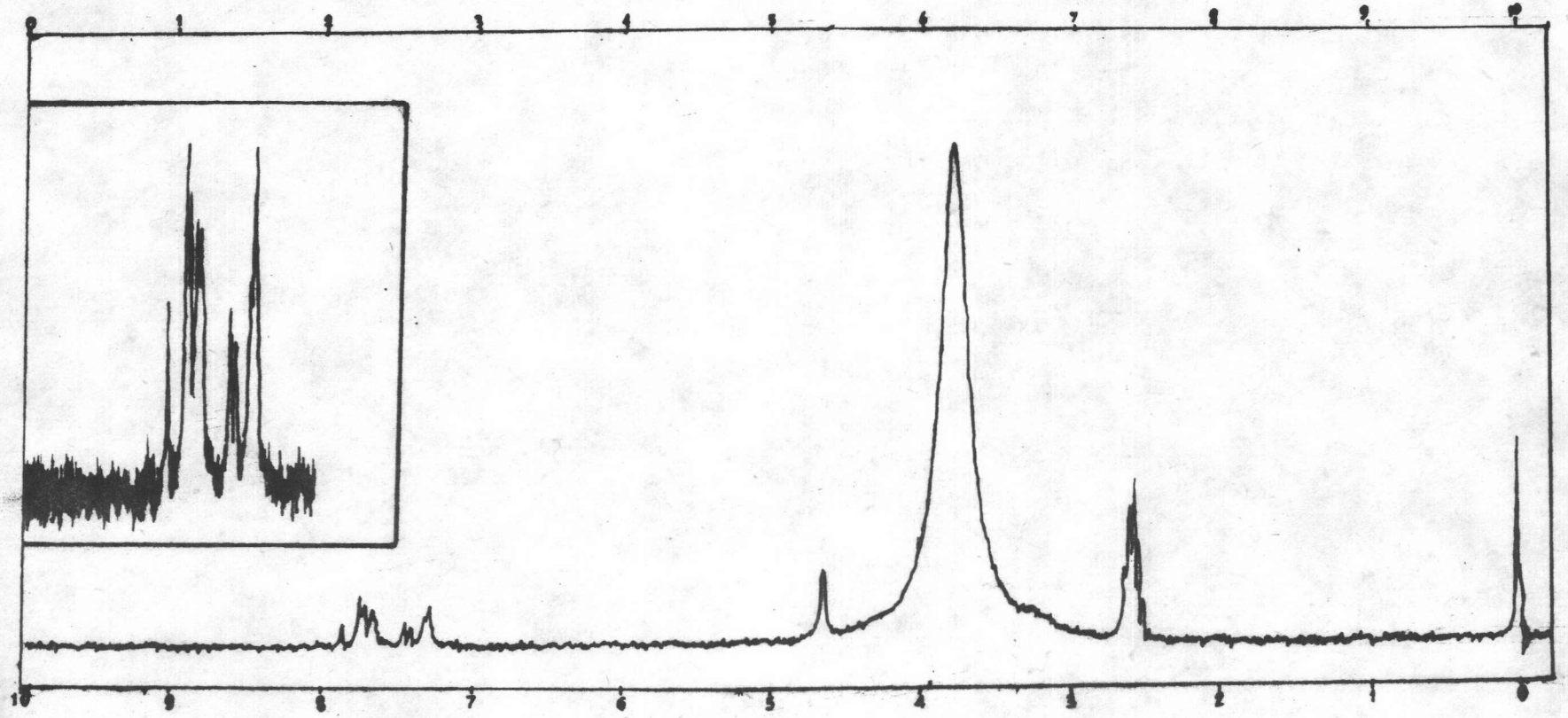

Figure 30 NMR spectrum of $A_1$ in DMSO - $d_6$

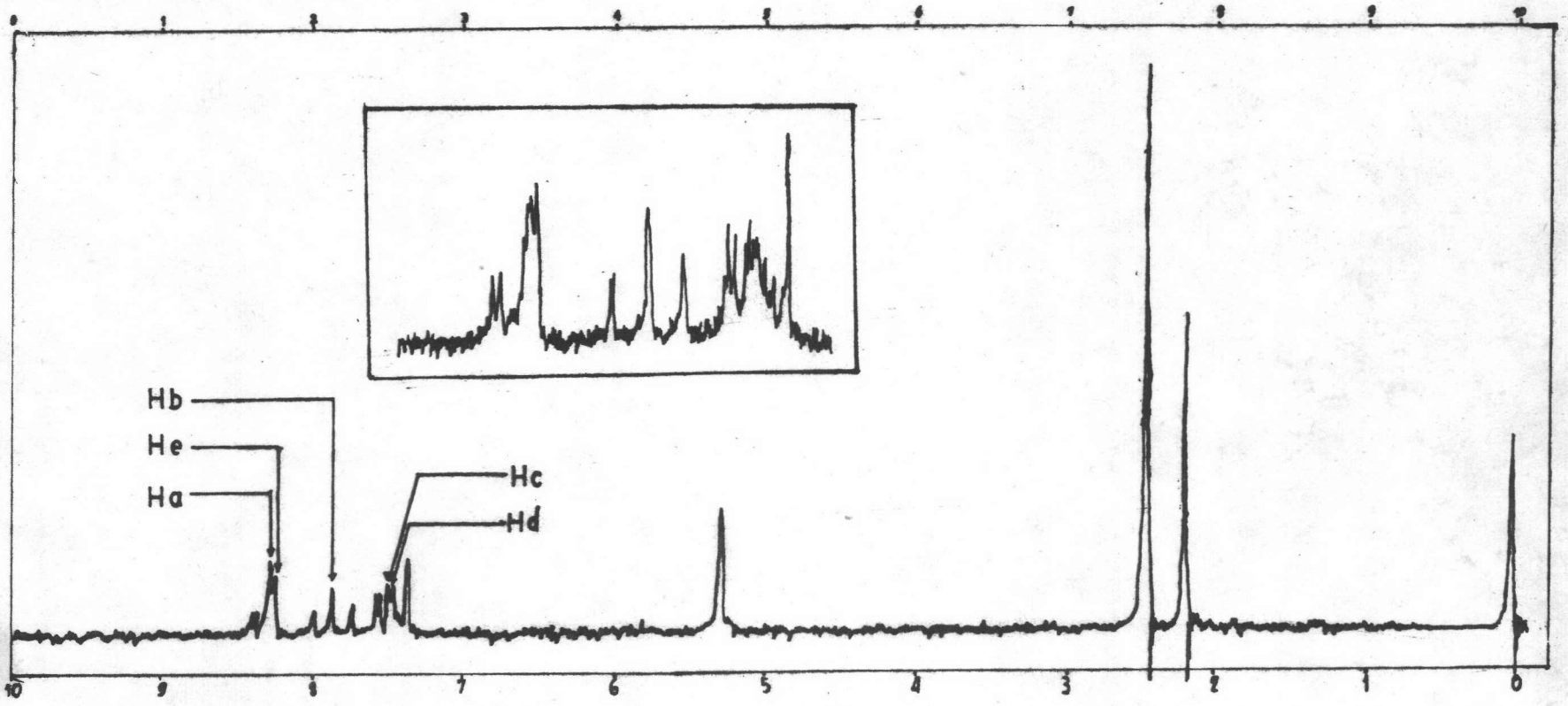


Figure 31 NMR spectrum of acetate derivative of $A_1$ in $CDCl_3$

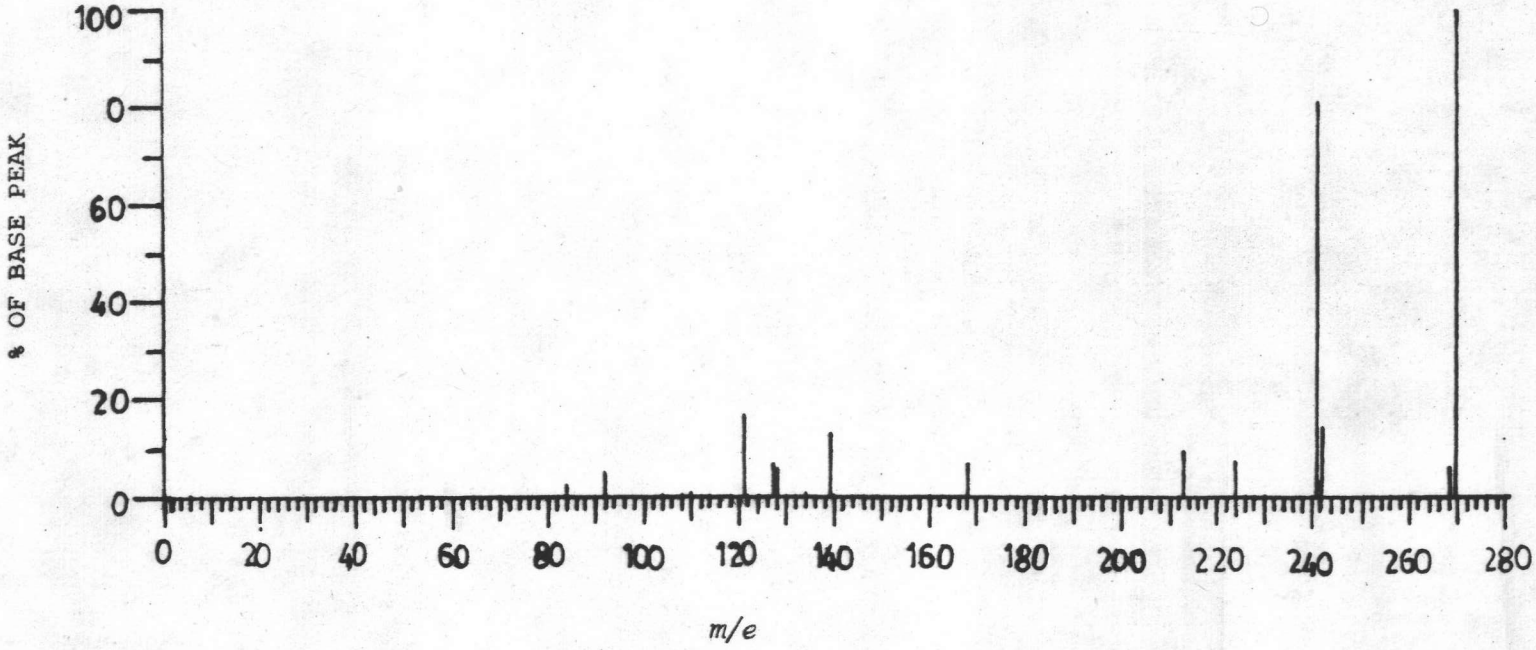


Figure 32 Mass spectrum of $A_1$

# V I T A

Miss Wandee Gritsanapan was born on September 12, 1950, in Uthaitanee. She got her degree in Bachelor of Science in Pharmacy in 1973 from the Faculty of Pharmaceutical Sciences, Chulalongkorn University. She used to work as a lecturer at the Diethelm Company Limited, Nestle Section, Food Products Division.