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A P P E N D I X



Reagents :

1. Ceric sulphate reagent :-

one per cent of ceric sulphate in 10 per cent sulphuric acid solution.

2. Dragendorff's spray reagent :-

Solution A Bismuth subnitrate (850 mg), water (40 ml),
acetic acid (10 ml)

Solution B Potassium iodide (8 g), water (20 ml)

Solution A and Solution B are mixed and add 20 ml glacial acetic acid, and 100 ml water as spray reagent.

3. Ehrlich's reagent :-

A solution of 0.1 g p-dimethylaminobenzaldehyde + 35% v/v sulphuric acid 100 ml + 5% ferric chloride 1.5 ml

4. Ferric chloride-perchloric acid reagent :-

A solution of 0.2 M anhydrous ferric chloride in 35% w/v perchloric acid, as spraying reagent

5. Fröhde's reagent :-

Sodium molybdate (0.1 g), Sulphuric acid (100 ml)

6. Mandelin's reagent :-

Ammonium vanadate (1 g), Sulphuric acid (200 g or 100 ml)

7. Marme's reagent :-

Dissolve CdI_2 (2 g) in boiling solution containing KI (4 g) in water (12 ml). This solution is mixed with 12 ml of saturated solution of KI.

8. Marquis's reagent :-

The reagent varies in composition from 1-6 drops of formaldehyde (40%) in sulphuric acid (100 ml)

9. Mayer's reagent :-

Dissolve HgCl_2 (2 g) in boiling solution containing KI (4 g) in water (12 ml). This solution is mixed with 12 ml of saturated solution of KI.

10. Mecke's reagent :-

A solution of selenious acid (0.5 g) in sulphuric acid (100 ml)

11. Wagner's reagent :-

I_2 (5 g) is dissolved in 10% KI solution (100 ml)

Code number of materials used and of the alkaloids

Lf	=	Crude extract from leaves
Bk	=	Crude extract from bark
F	=	Eluate fraction of crude extract of leaves from column
C	=	Authentic cadambine tetra-acetate
D	=	Authentic 3 α -dihydrocadambine penta-acetate
NR-1	=	Isolated alkaloid
NR-1 acetate	=	Acetate derivative of isolated alkaloid

TLC Adsorbents and Solvent Systems

a	=	Silica gel G/Chloroform, ethyl alcohol 1+1
b	=	Silica gel G/Chloroform, ethyl alcohol, 1% NH ₄ OH 45+45+10
c	=	Silica gel G/Chloroform, methanol 6+4
d	=	Silica gel G/Butanol, acetic acid, water 4+1+1
e	=	Silica gel G/Ethyl acetate
f	=	Aluminium oxide G/Chloroform, ethyl alcohol 1+1

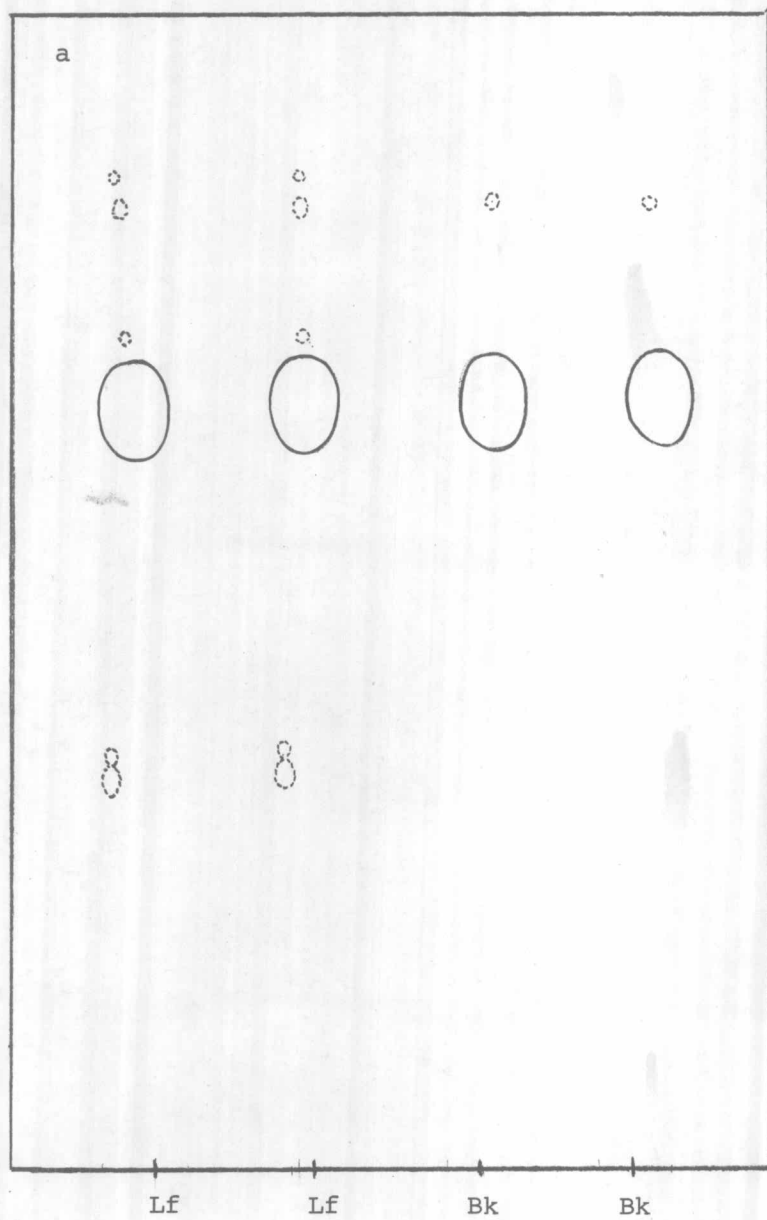


Figure VII Thin layer chromatogram of alkaloids from the leaves and bark of *Anthocephalus chinensis* A. Rich.

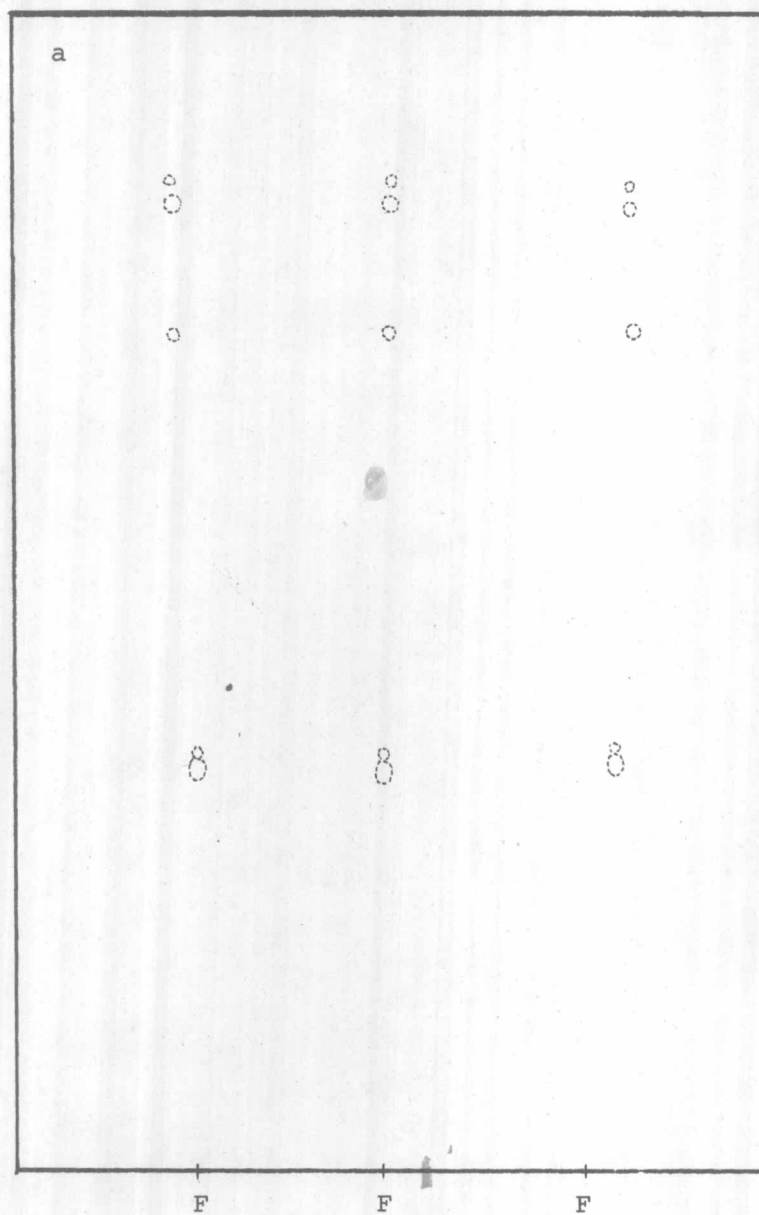


Figure VIII Thin layer chromatogram of alkaloids from the leaves of *Anthocephalus chinensis* A. Rich. (eluated fraction)

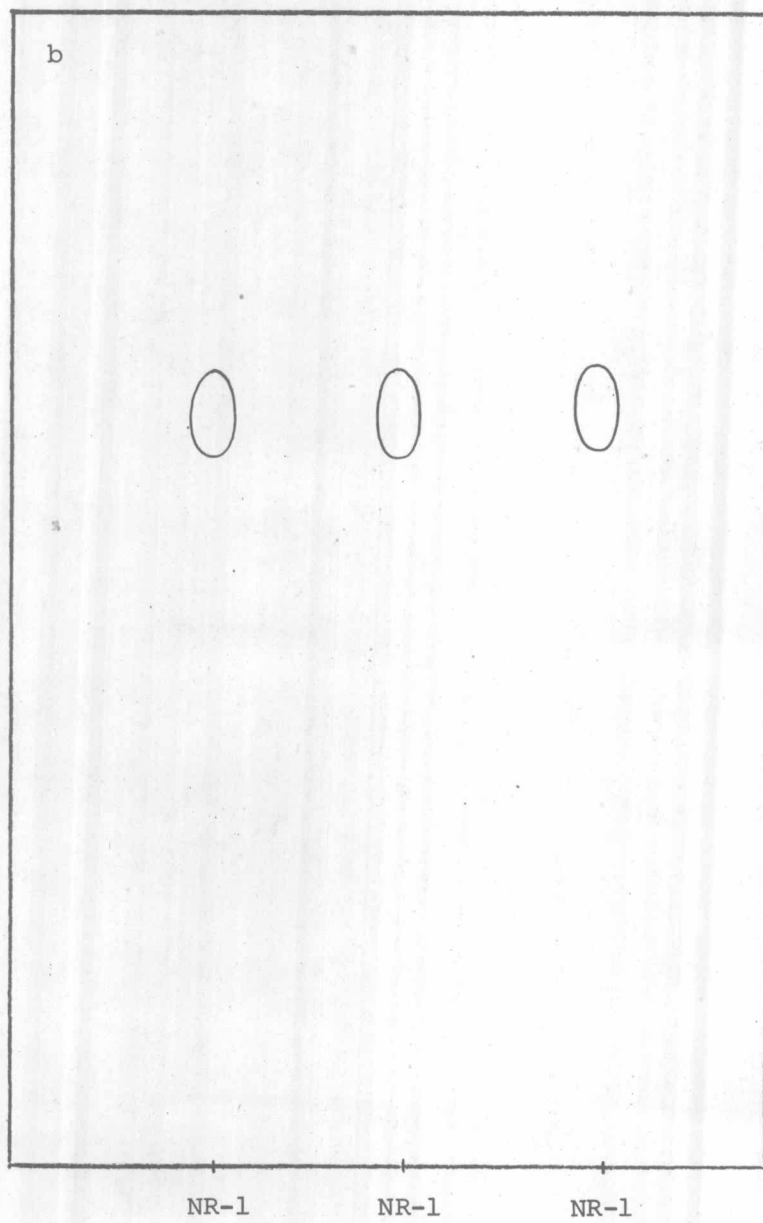


Figure IX Thin layer chromatogram of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich.

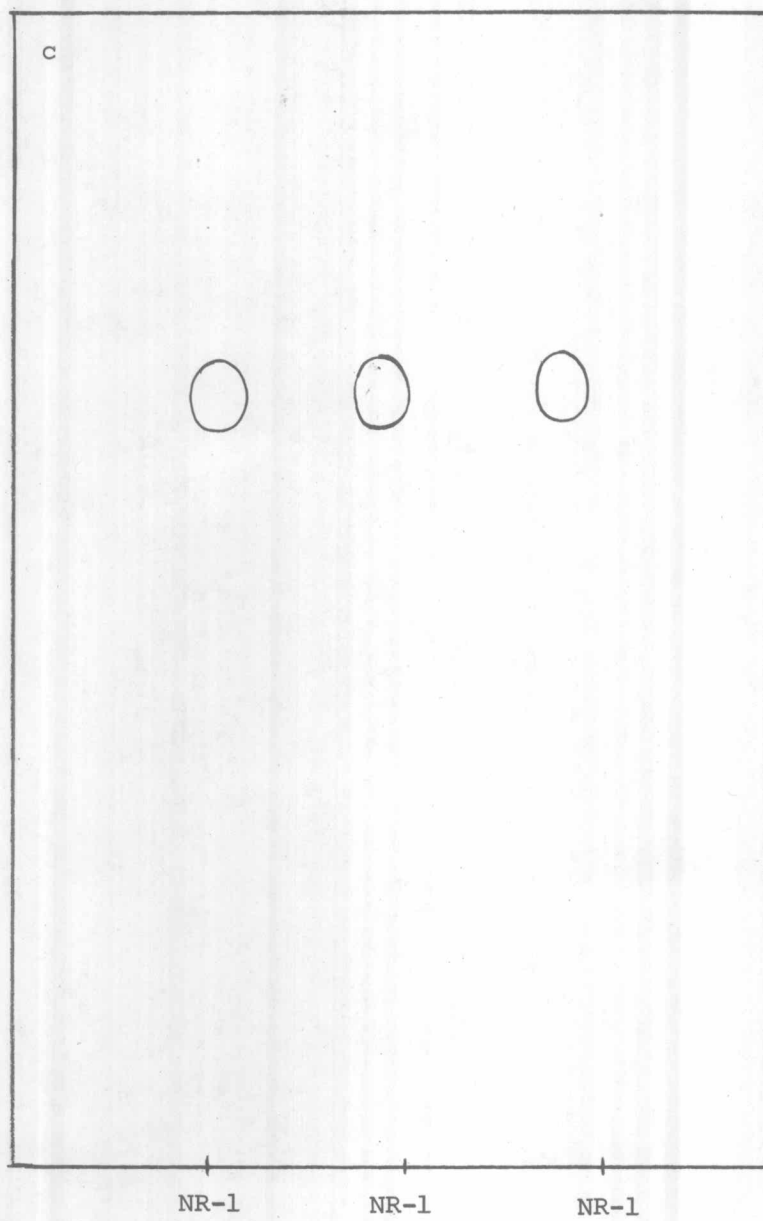


Figure X Thin layer chromatogram of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich.

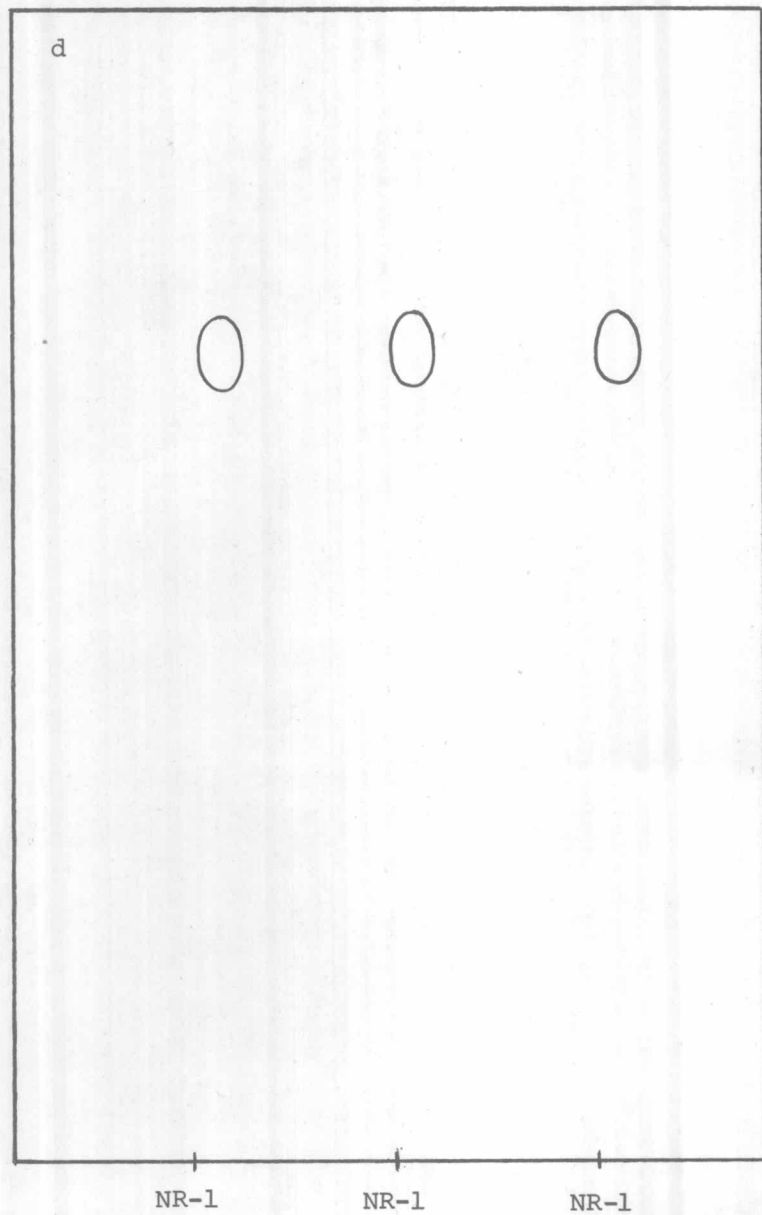


Figure XI Thin layer chromatogram of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich.

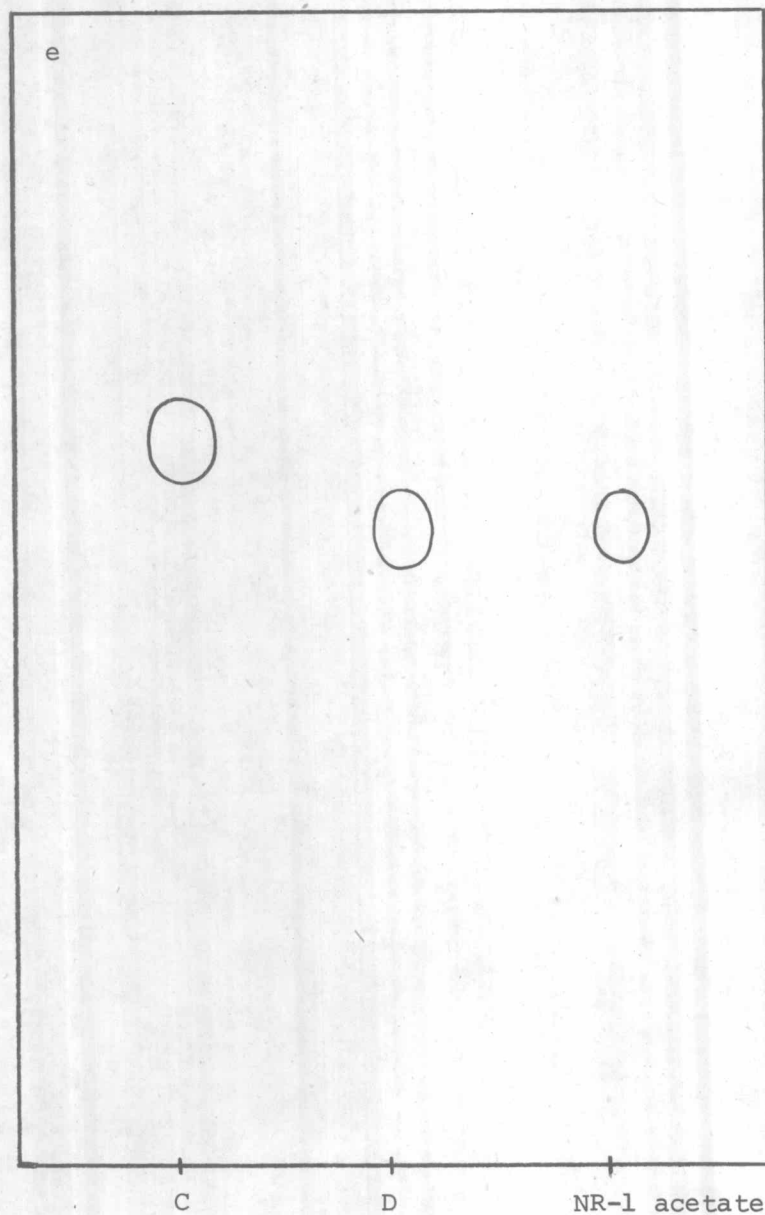


Figure XII Thin layer chromatogram of alkaloid NR-1 acetate from the leaves of *Anthocephalus chinensis* A. Rich. (with authentic samples)

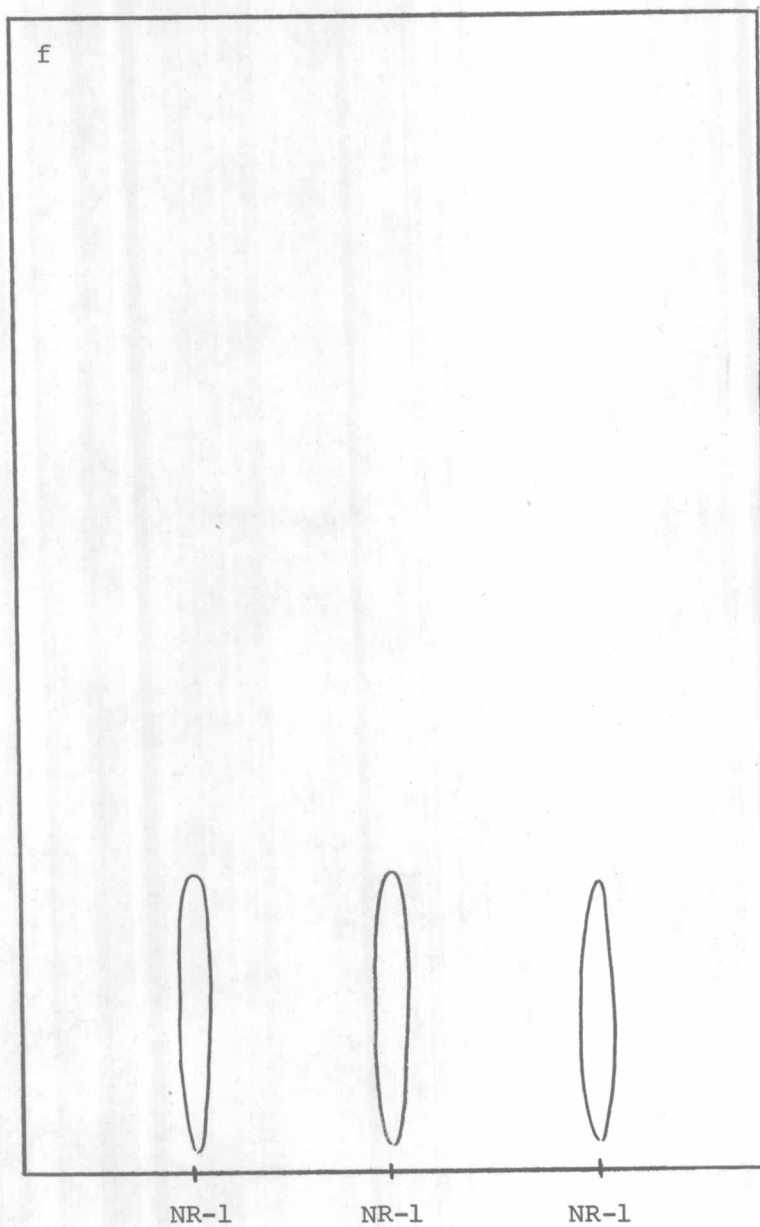


Figure XIII Thin layer chromatogram of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich.

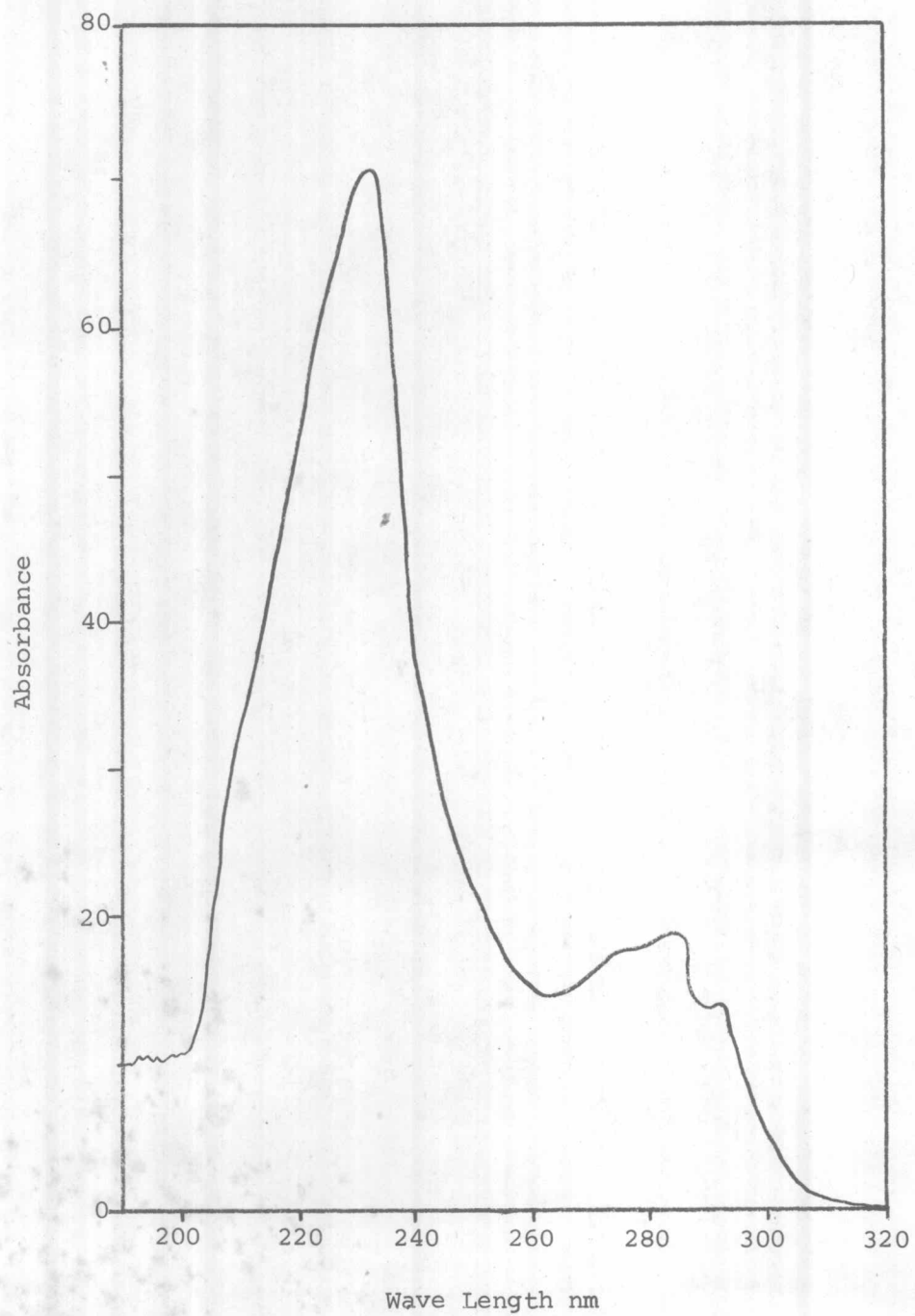


Figure XIV Ultraviolet absorption spectrum of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich. in ethanol

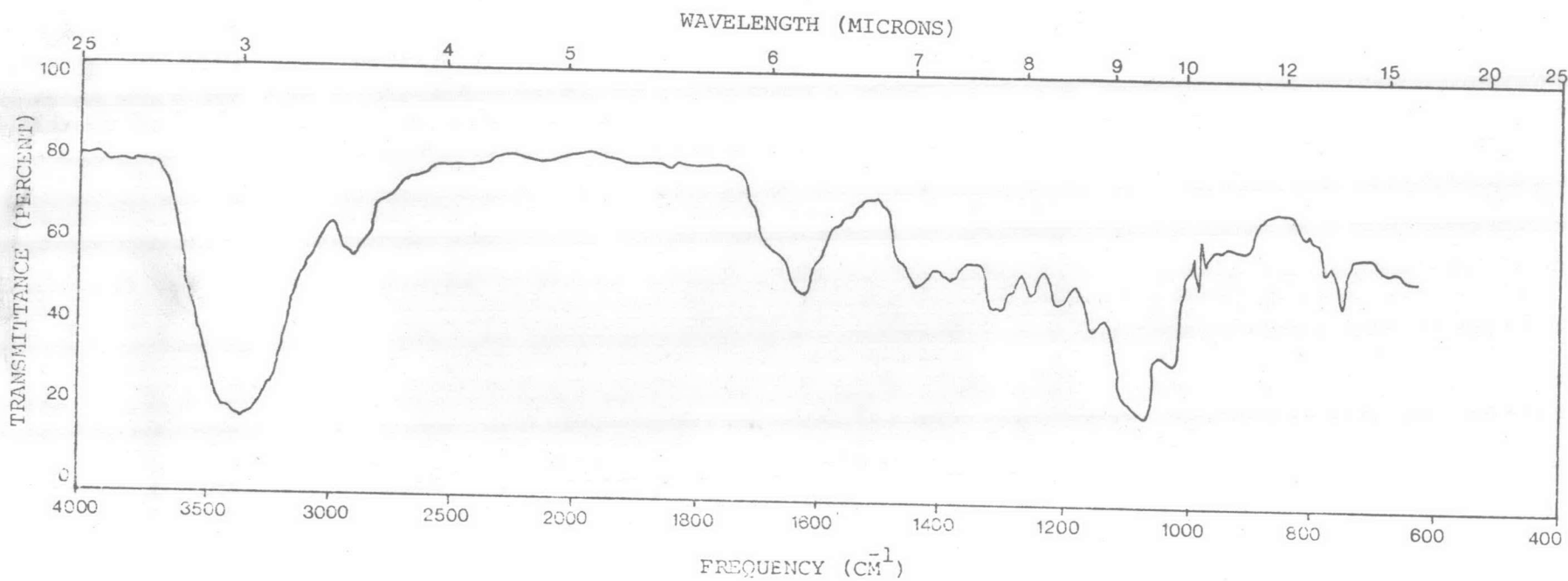


Figure XV Infrared absorption spectrum of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich. in KBr disc.

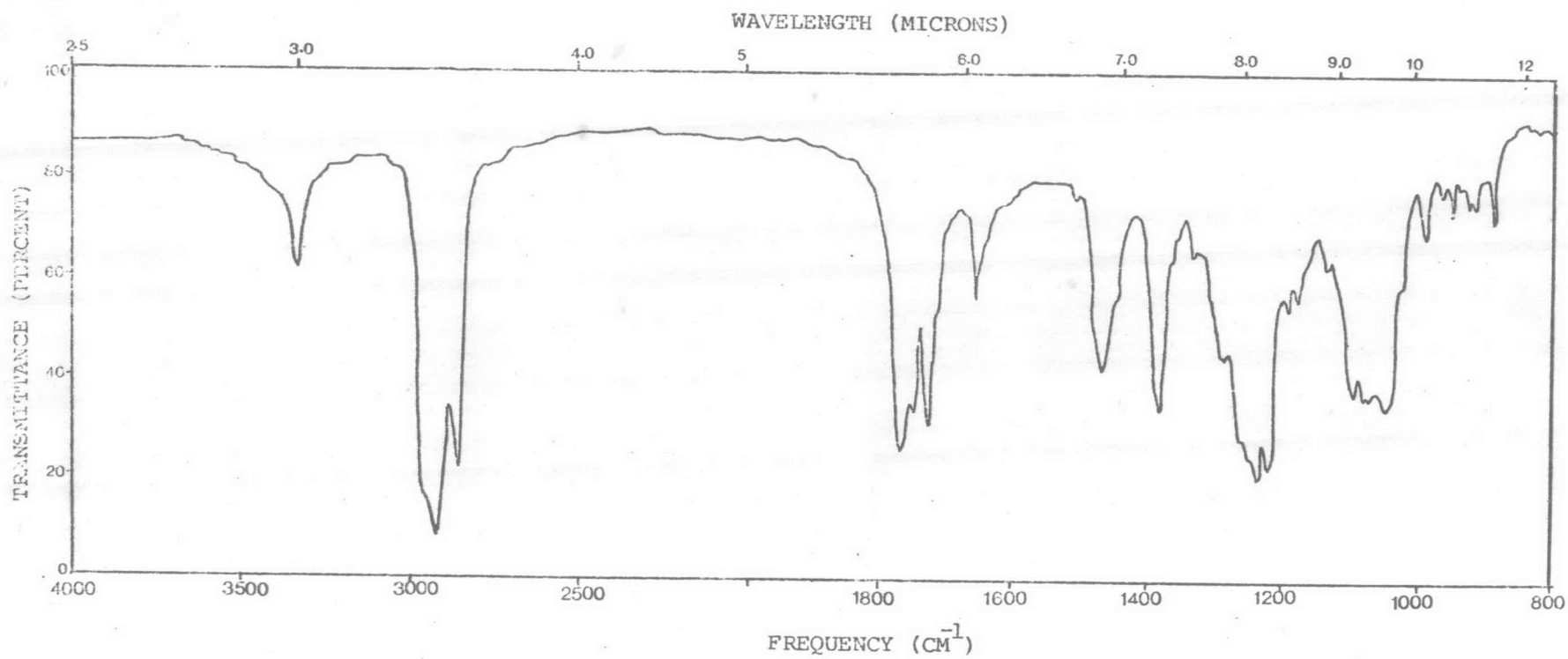


Figure XVI Infrared absorption spectrum of acetate derivative of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich. in Nujol mull.

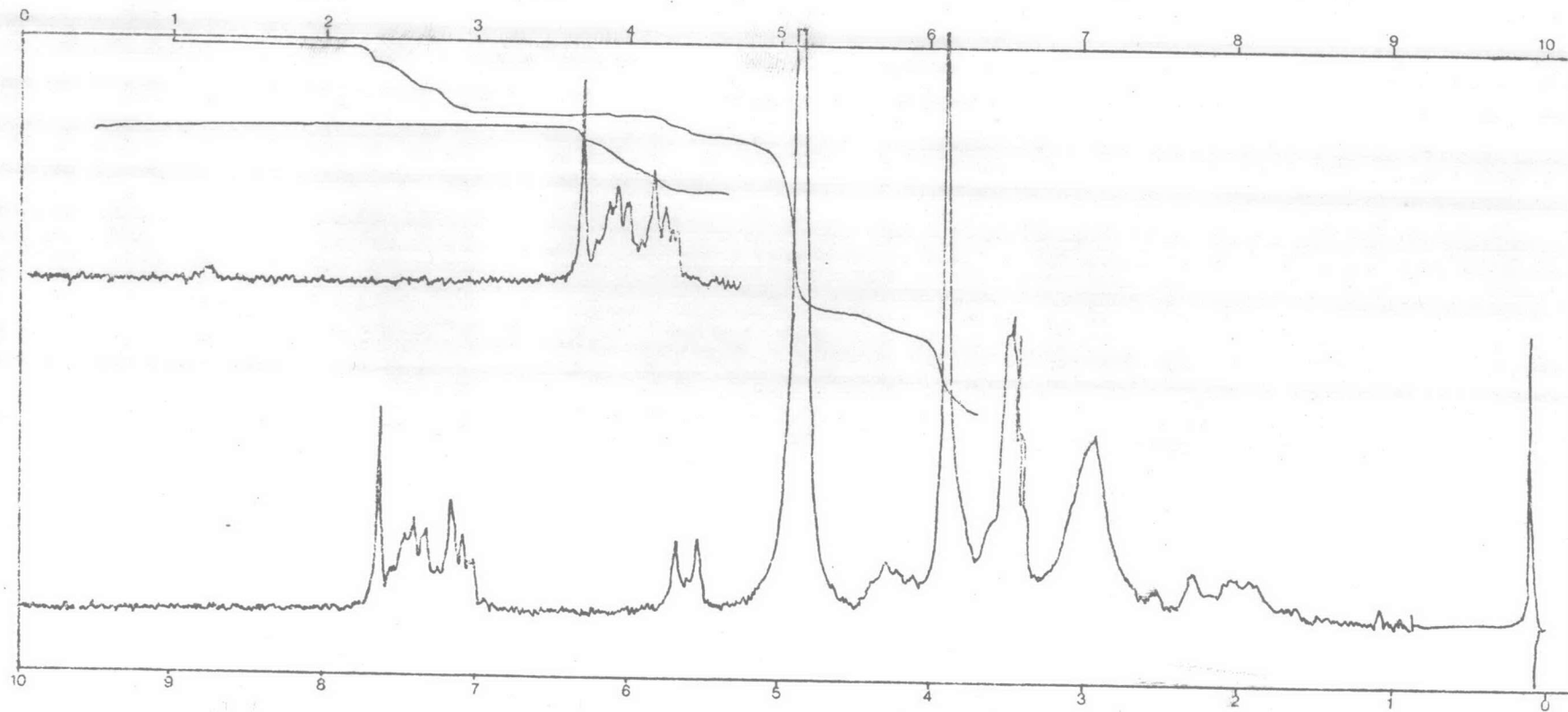


Figure XVII NMR spectrum of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich. in CD_3OD

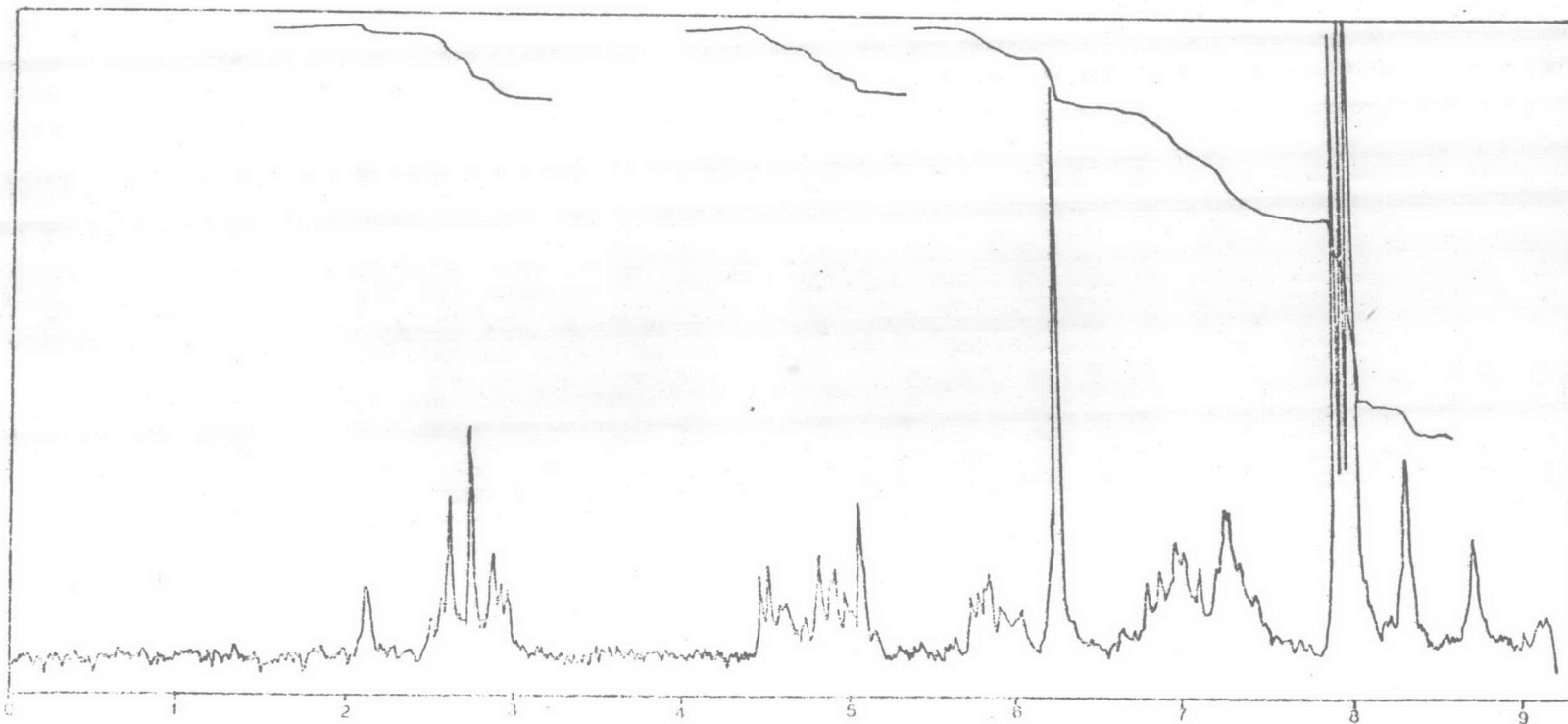


Figure XVIII NMR spectrum of acetate derivative of alkaloid NR-1 from the leaves of *Anthocephalus chinensis* A. Rich. in CDCl_3

V I T A

Name Mr. Nijsiri Ruangrunsi

Education B.Sc. in Pharmacy, Faculty of Pharmaceutical Sciences,
Chulalongkorn University, Bangkok 5, Thailand, 1974.

Position and Site of the Employer's Office

Instructor in the Department of Pharmacognosy,
Faculty of Pharmaceutical Sciences, Chulalongkorn
University, Bangkok 5, Thailand.

