

CHAPTER IV



CONCLUSIONS

A flavonoid and a sterylglucoside were isolated from the stem bark of *Albizzia julibrissin*. Their structures were elucidated as 7,3',4'-trihydroxyflavone and α -spinasteryl-D-glucoside respectively. Both compounds were found to be inactive in antifertility. However, a triterpenoid saponin composed of acacic acid and 3 sugars, namely glucose, rhamnose and fucose, isolated from the butanolic fraction exhibits a strong uterotonic activity.

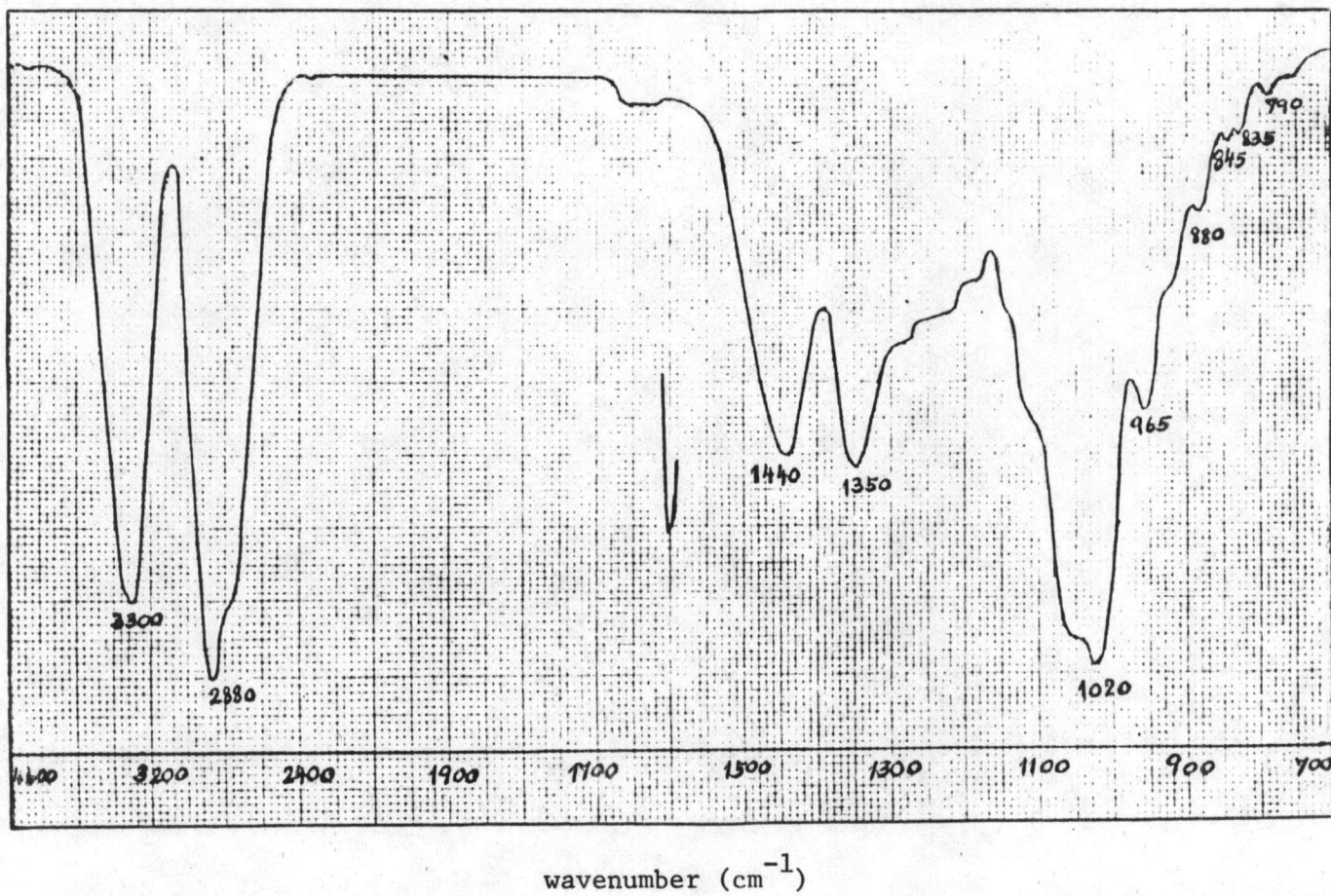
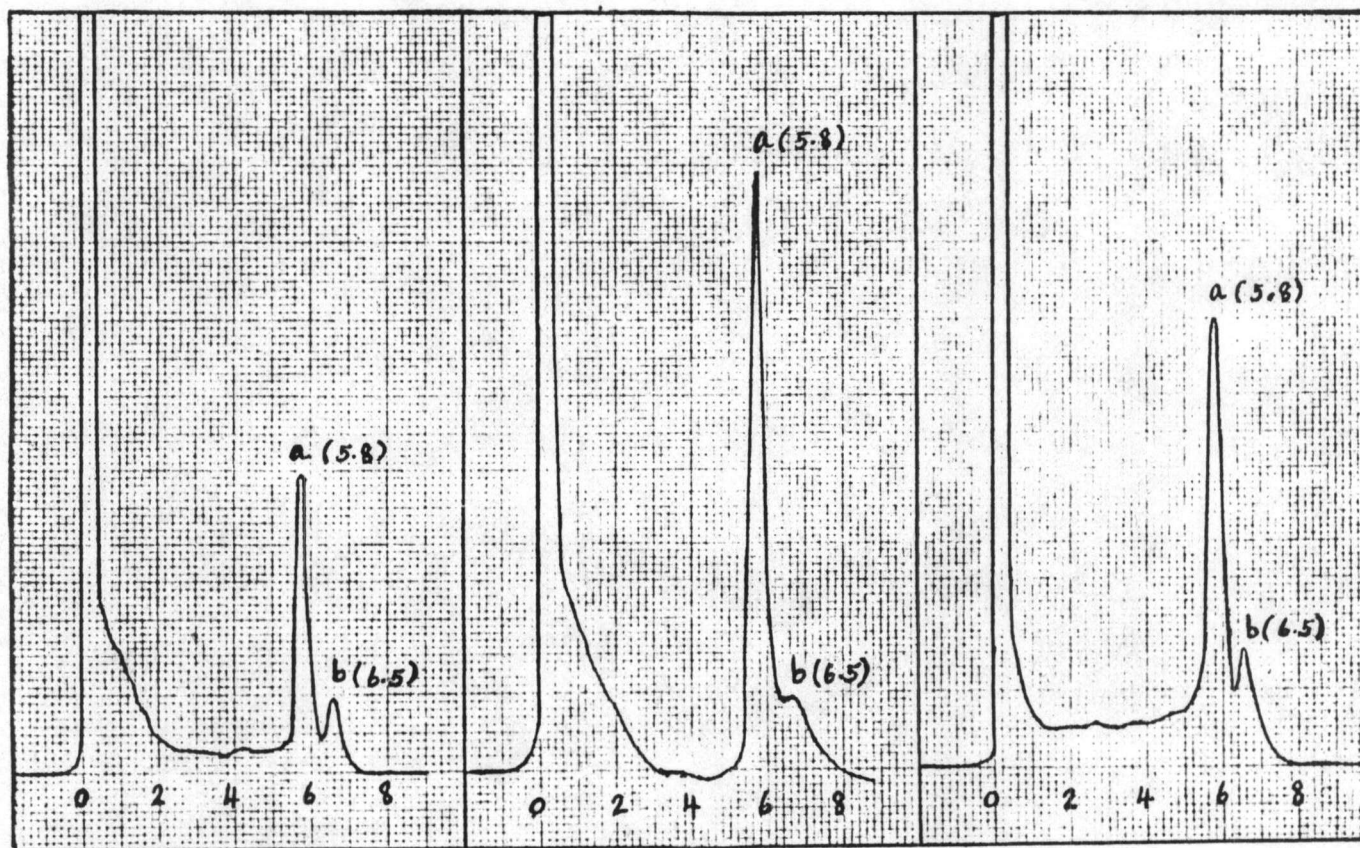


Fig. I IR spectrum of Compound I



R_t

sterol standard

a) α -spinasterol

b) Δ^7 -stigmastenol

R_t

Compound II

R_t

Compound II + standard

Fig. II Gas chromatograph of Compound II

CONDITION : column OV-1 (60-80 mesh), temperature; injector 190° ,
 detector (FID) 200° , column 170° , Chart speed 1 cm/min,
 carrier gas (N_2) 45 cm³/min

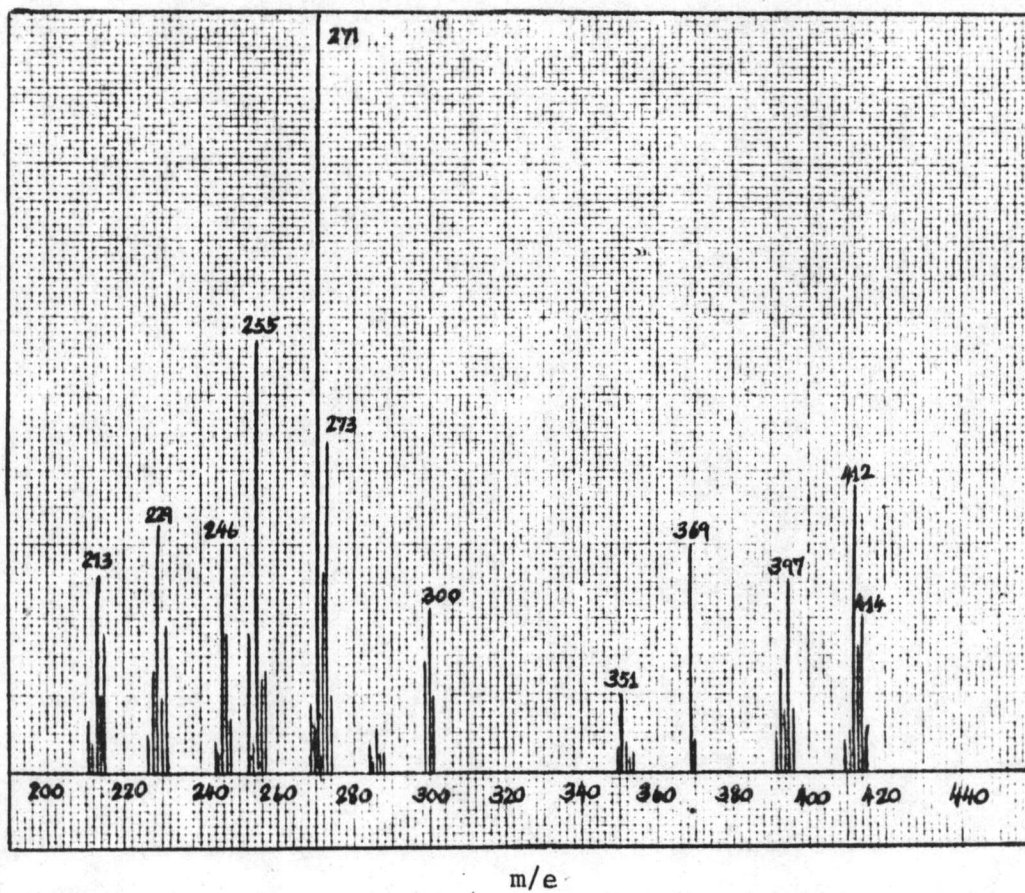
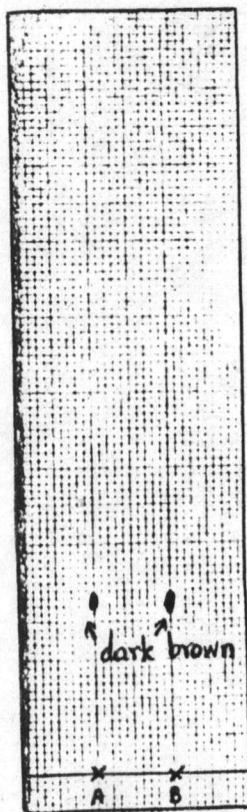


Fig. III Mass spectrum of Compound II



A = glucose standard

B = Liquid II (R_f 0.23)

Solvent system

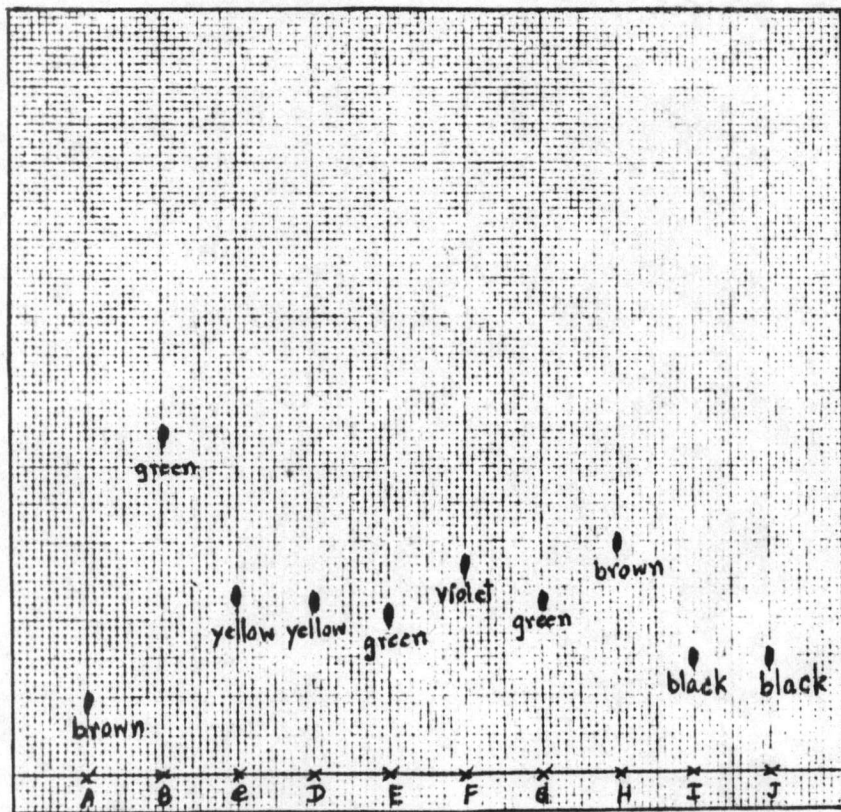
MeOH-CHCl₃-Me₂CO-NH₄OH 5:2:2:3 v./v.

(lower layer)

The spots turned into dark brown

when heated with 50% H₂SO₄.

Fig. IV TLC of Liquid II and glucose standard



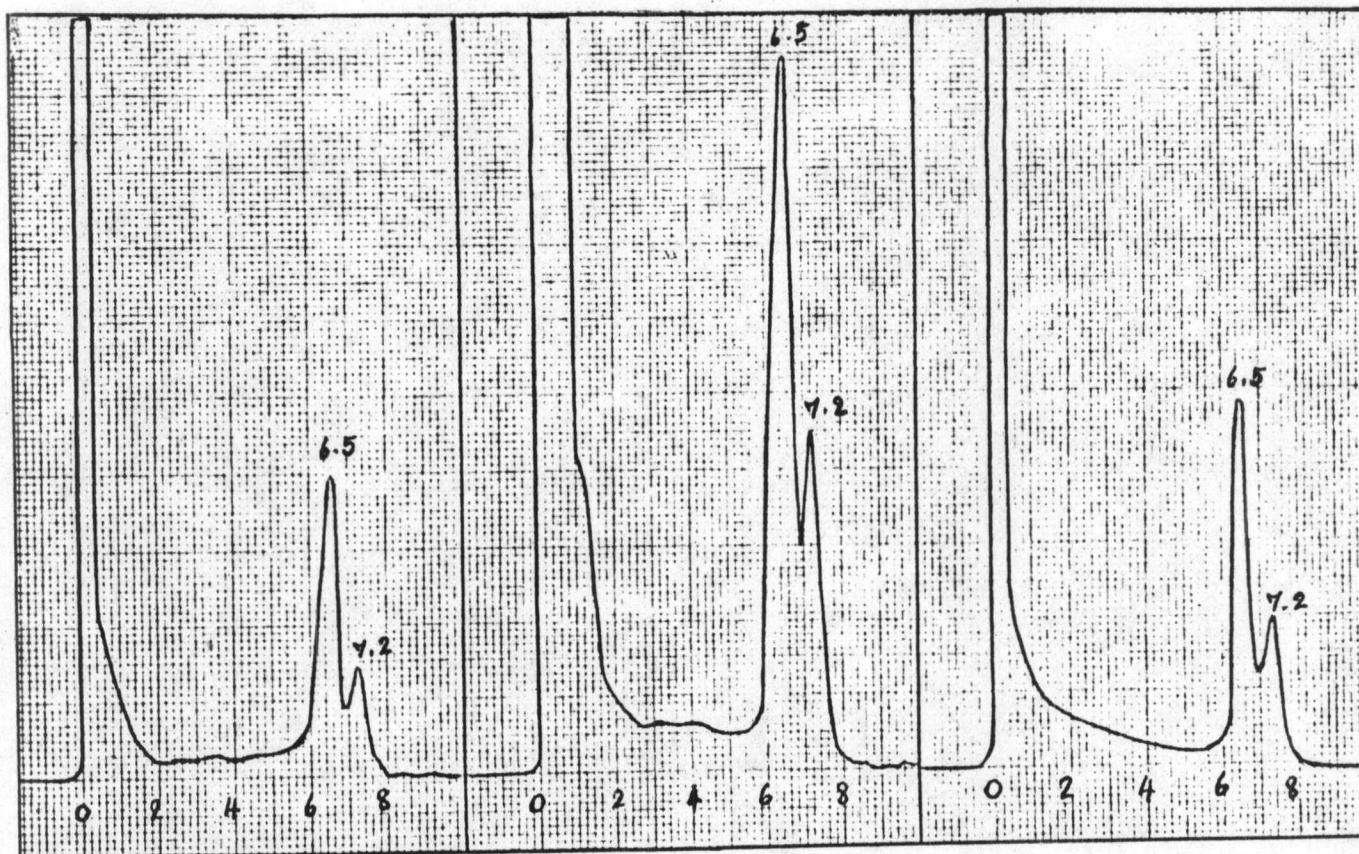
- A = raffinose
 B = β -methyl-D-xylose
 C = rhamnose
 D = fucose
 E = arabinose
 F = xylose
 G = mannose
 H = ribose
 I = glucose
 J = Liquid II (R_f 0.15)

Solvent system :

CHCl_3 -MeOH- H_2O 52:25:8 v./v. (lower layer).

The spots appeared after spraying 50% H_2SO_4 and heating.

Fig. V TLC of Liquid II and suger standards



R_t

glucose standard

R_t

Liquid II

R_t

Liquid II + standard

R_t 6.5 = α -glucose

7.2 = β -glucose

Fig. VI GLC of Liquid II and glucose standard.

CONDITION : column OV-2 (60-80 mesh), temperature; injector 190°

detector (FID) 200°, column 170°, chart speed 1 cm/min,

carrier gas (N_2) 45 cm³/min

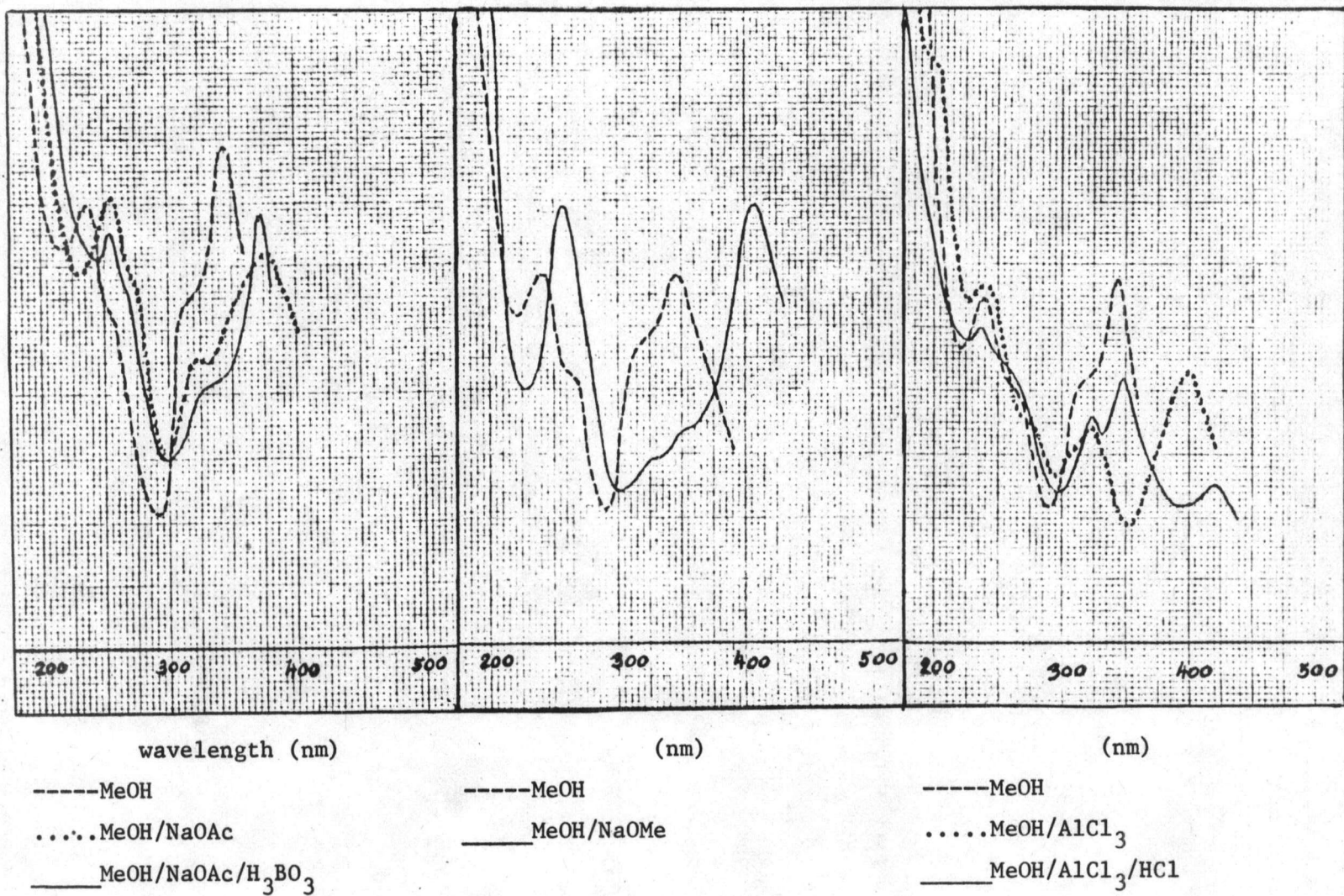
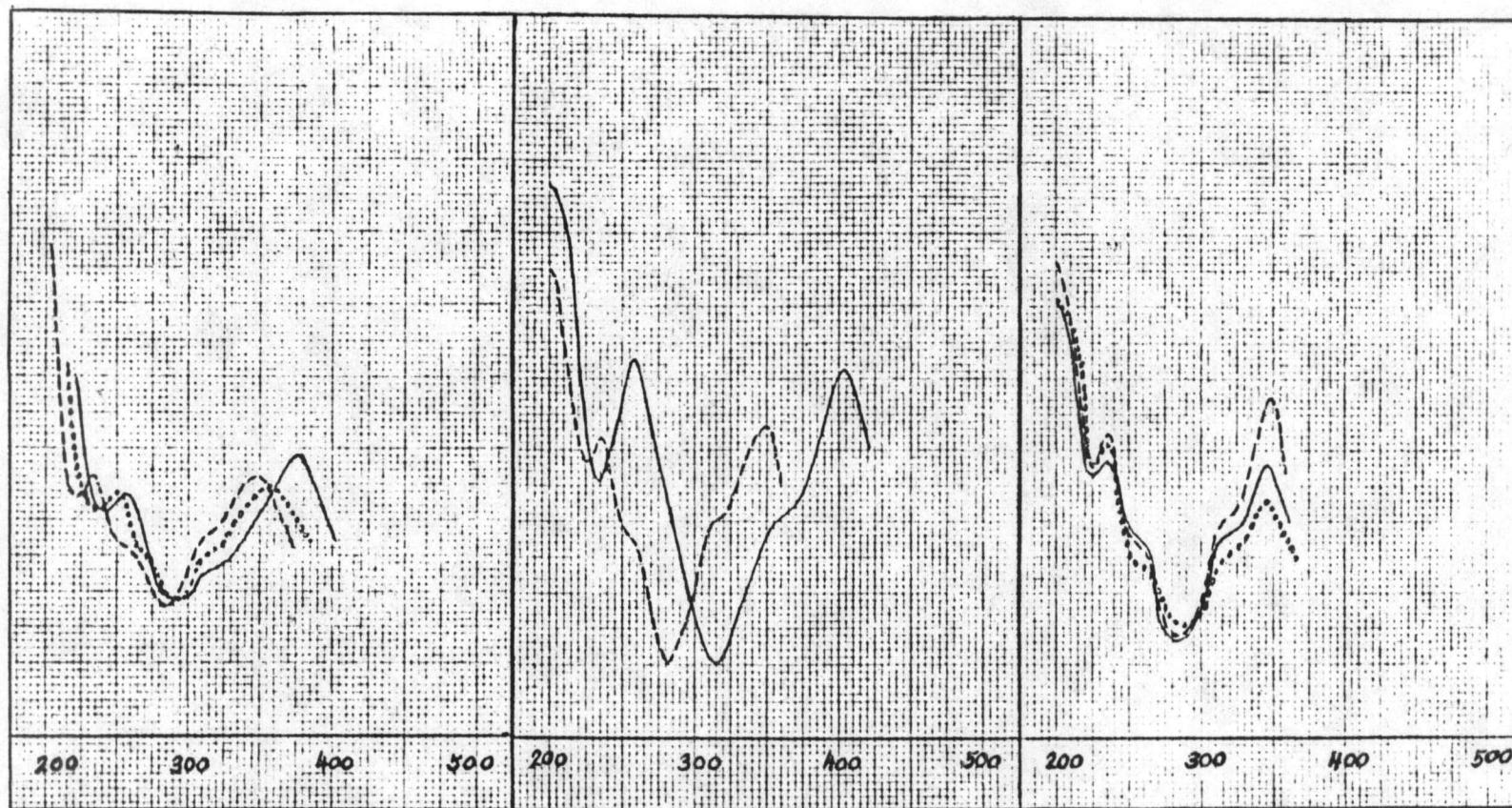


Fig. VII UV spectra of Compound IV in MeOH



wavelength (nm)

(nm)

(nm)

----EtOH

....EtOH/NaOAc

___EtOH/NaOAc/H₃BO₃

----EtOH

___EtOH/NaOH

----EtOH

.....EtOH/AlCl₃

___EtOH/AlCl₃/HCl

Fig. VIII UV spectra of Compound IV in EtOH

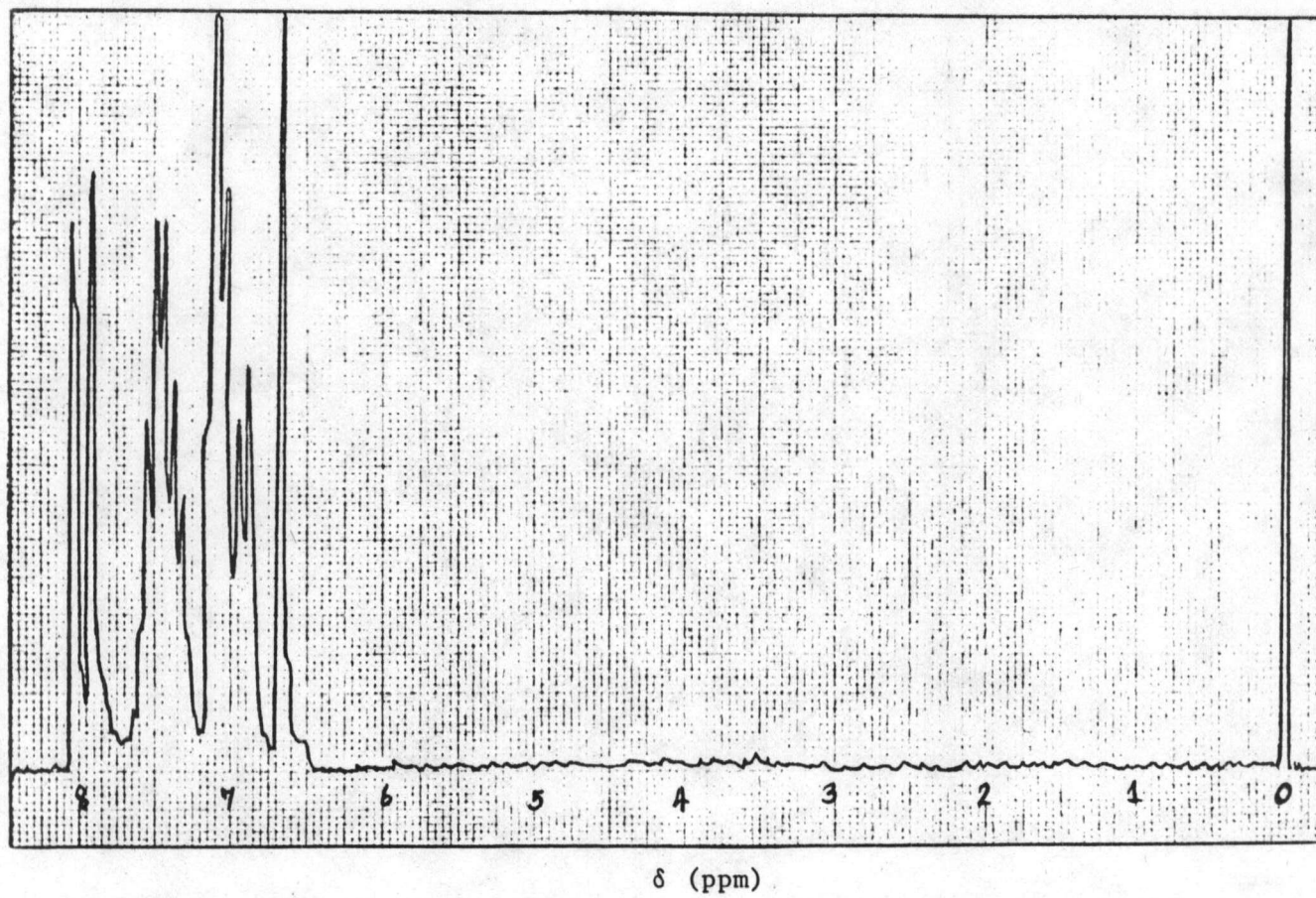


Fig. IX $^1\text{H-NMR}$ spectrum of Compound IV

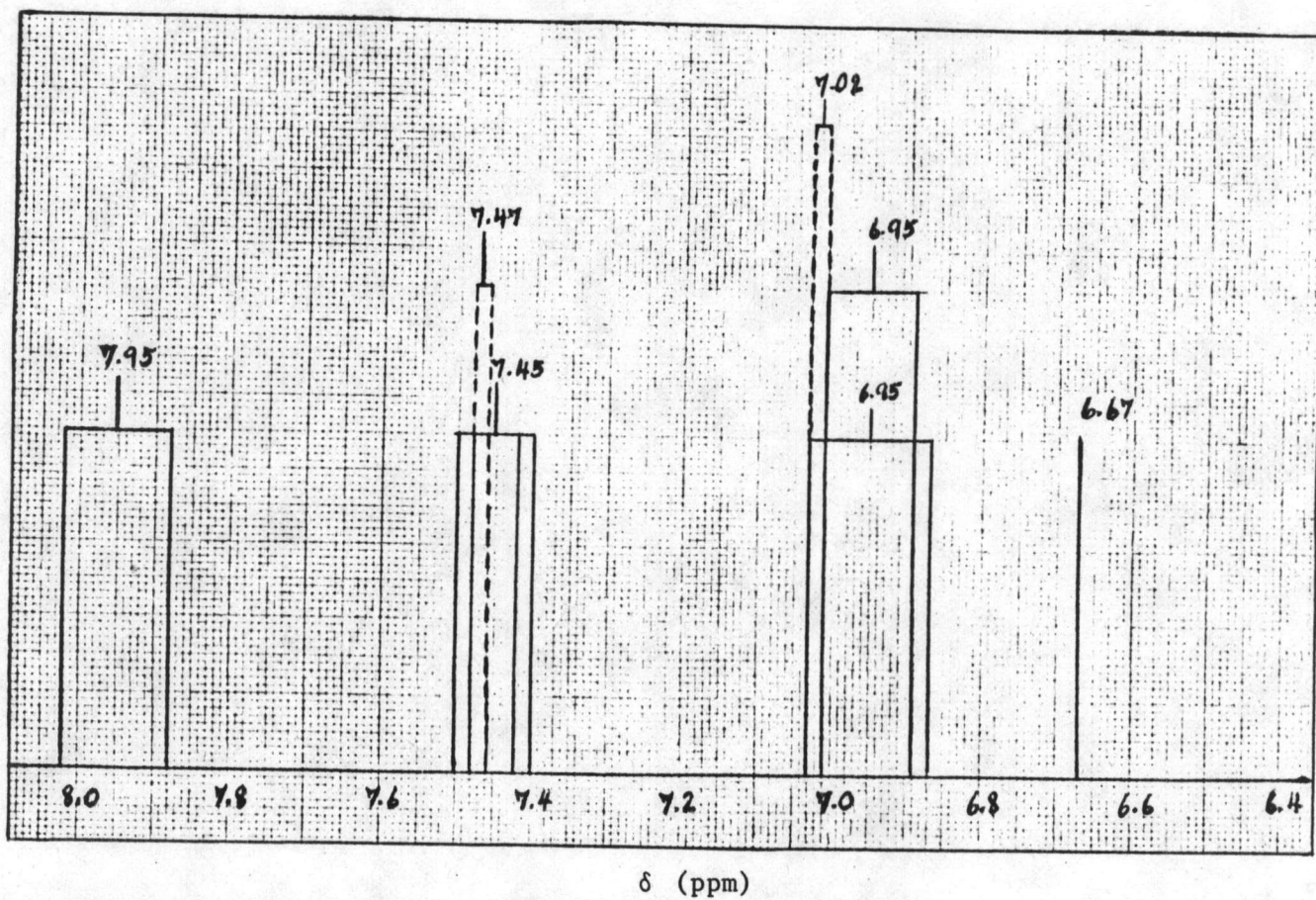


Fig. X $^1\text{H-NMR}$ splitting pattern of Compound IV

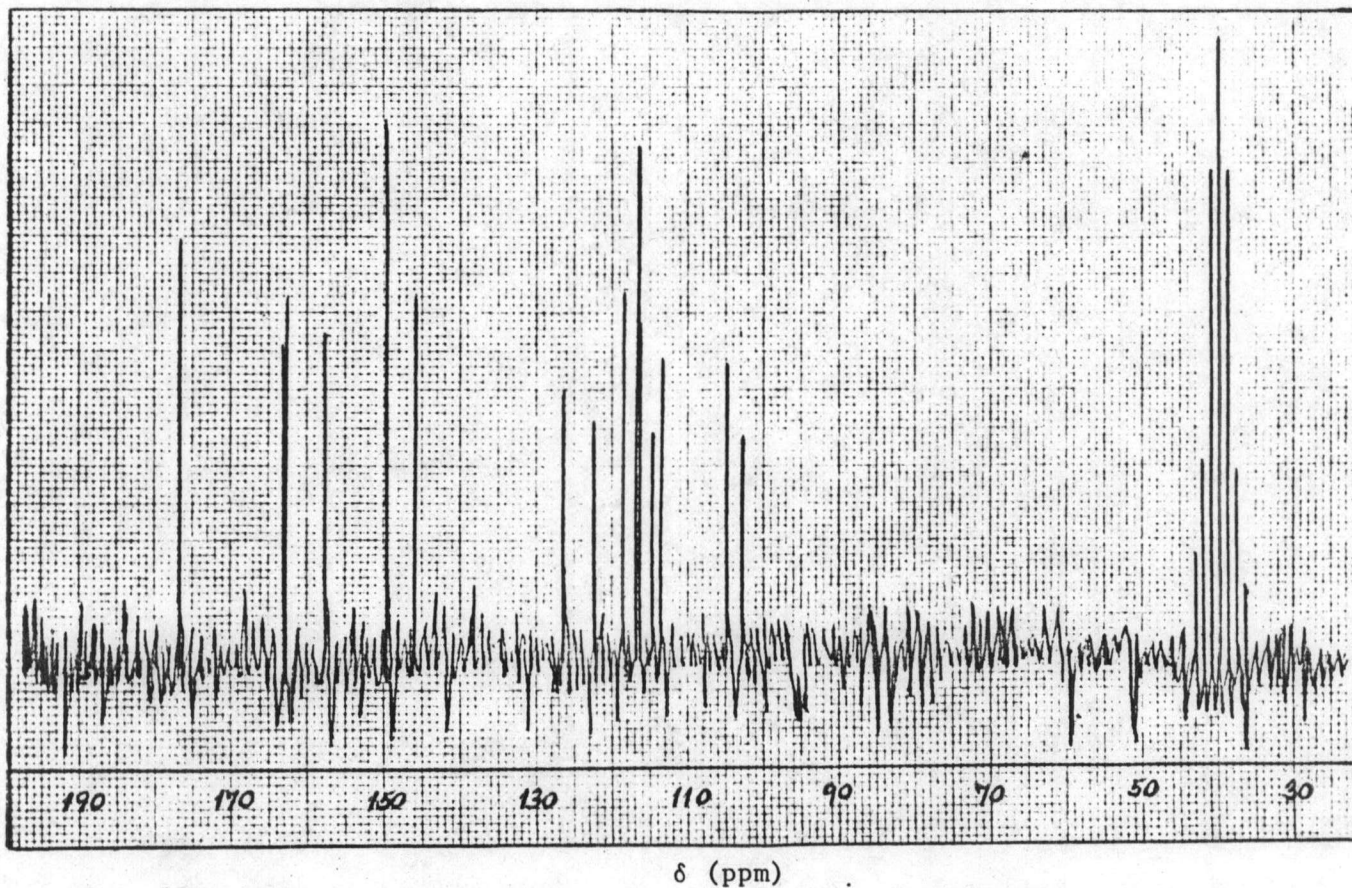


Fig. XI ¹³C-NMR spectrum of Compound IV

176.6	— C-4	122.2	— C-1'	42.5
163	— C-2	118.2	— C-6'	41.5
162.8	— C-7	116.2	— C-5'	40.6
157.6	— C-9	116.	— C-10	39.6
149.1	— C-4'	114.6	— C-6	38.5
145.8	— C-3'	113.2	— C-2'	37.2
126.2	— C-5	104.8	— C-3	36.2
		102.5	— C-8	

DMSO

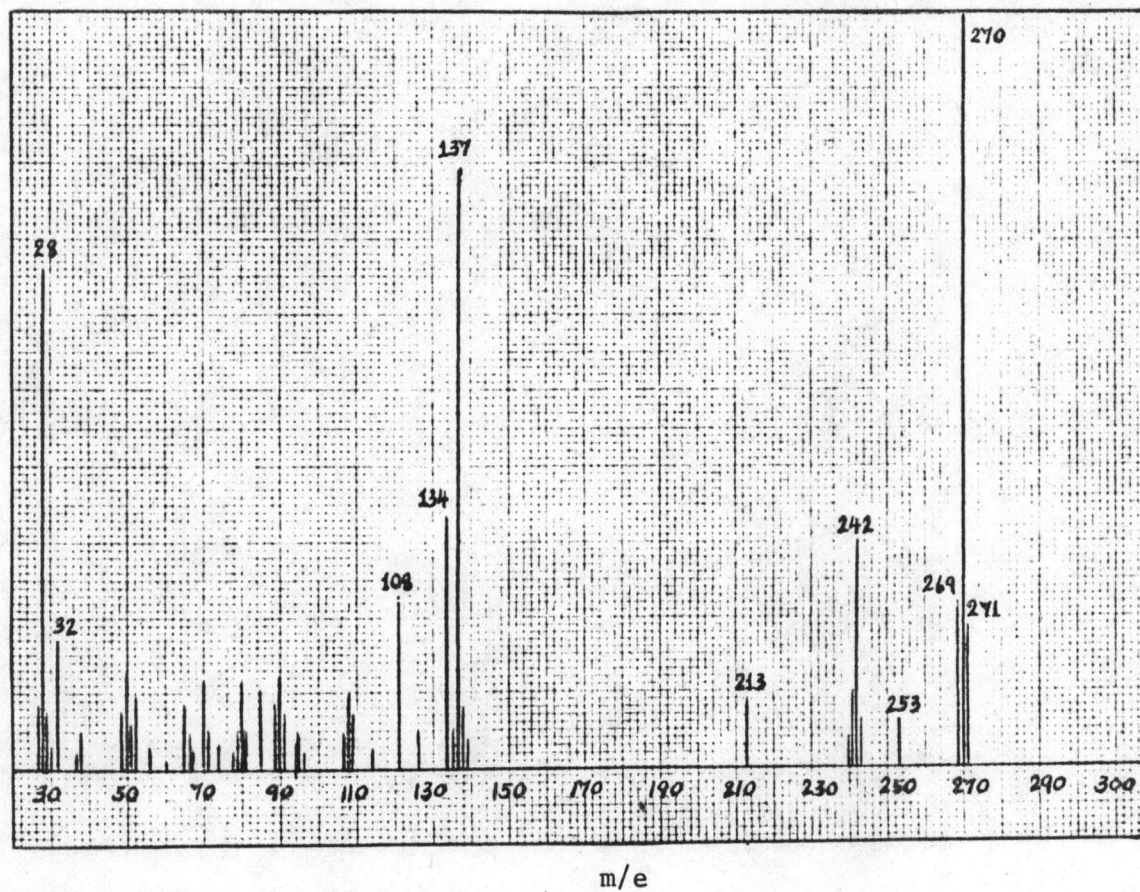


Fig. XII Mass spectrum of Compound IV

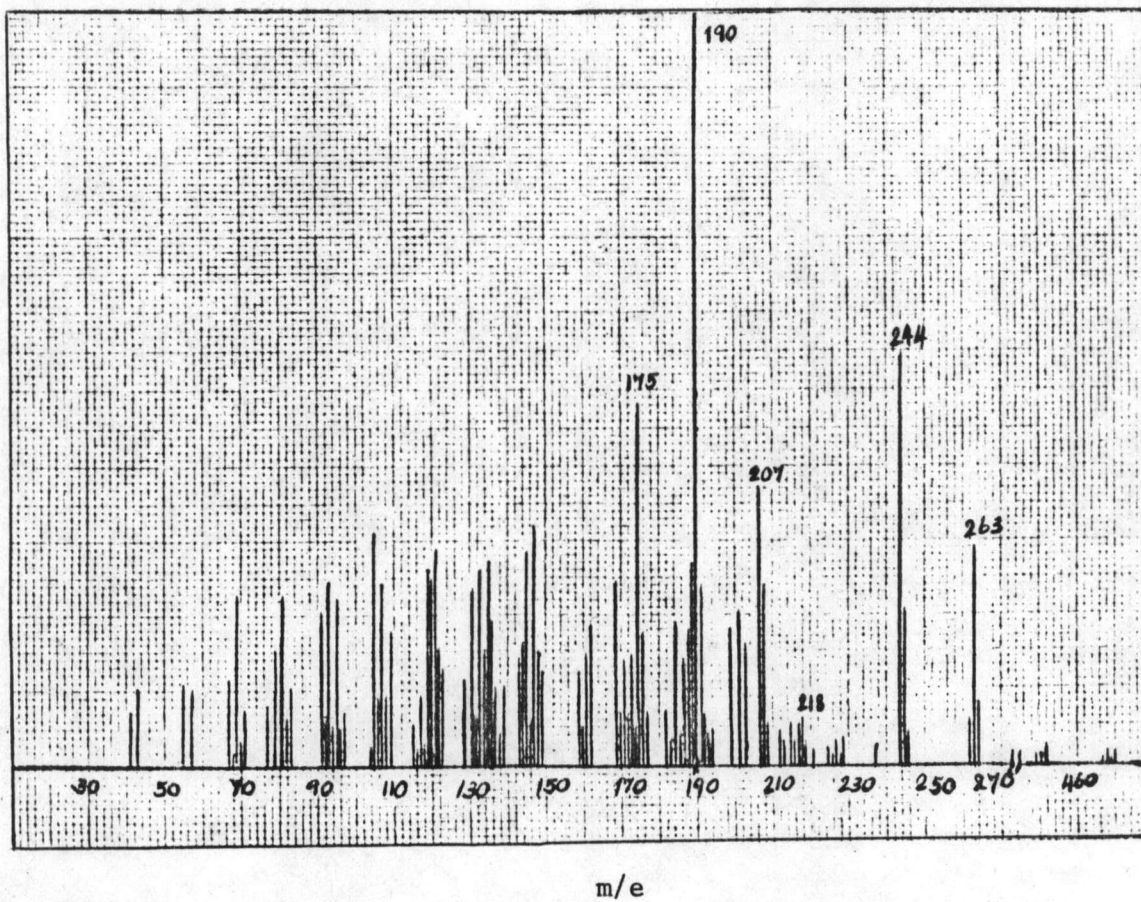


Fig. XIII Mass spectrum of Compound V