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A P P E N D I X

Vanillin - Sulphuric reagent

Spray reagent : 3 gm Vanillin is dissolved in 100 ml absolute ethanol, and 0.5 ml sulphuric acid(d1.84) is added to the solution.

Treatment : Heat to 120°C until green - blue spots are seen.

Solvents and chemicals used

95% ethanol

10% aqueous lead acetate solution

chloroform

acetone

anesthetic ether

ethyl acetate

sodium sulphate anhydrous

Key to Figures XVIII - XX

PS-1 = Isolated dihydroflavonol (dihydroquercetin 4'-methyl ether)

PS-2 = Isolated dihydroflavonol (dihydroquercetin 4',7-dimethyl ether)

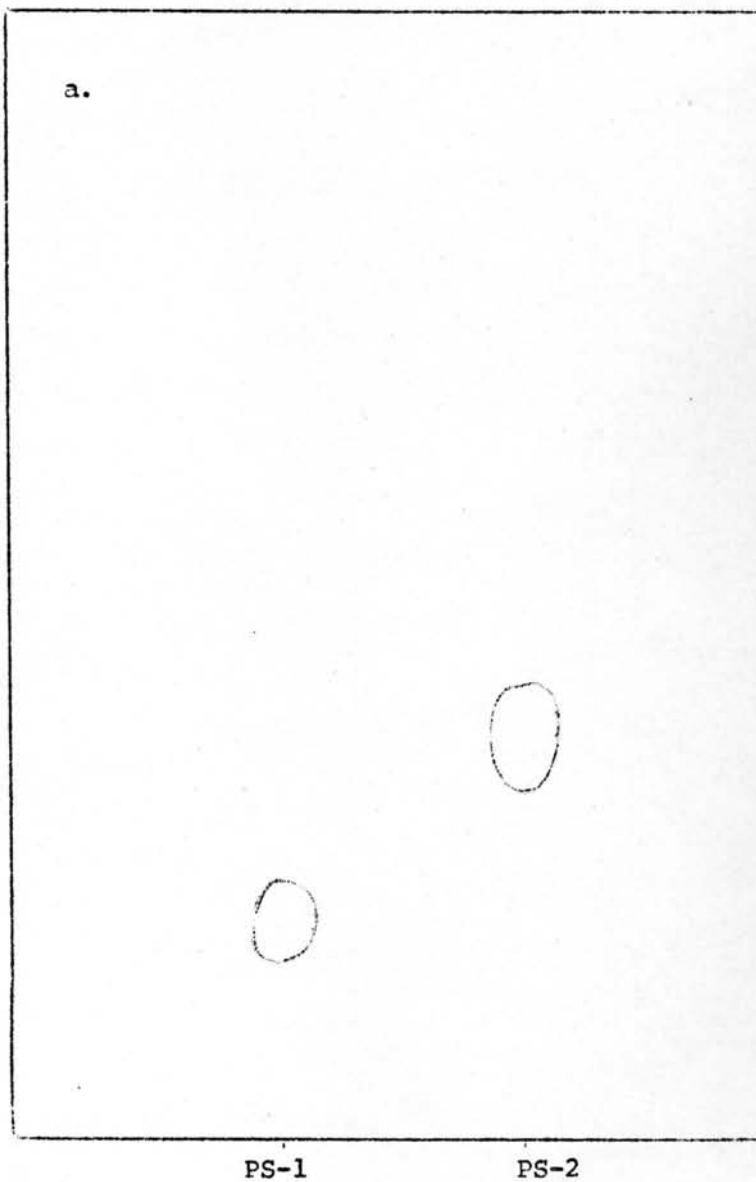


Figure XVIII Thin layer chromatogram of dihydroflavonols
PS-1 and PS-2 from the leaves of *Blumea
balsamifera* DC.

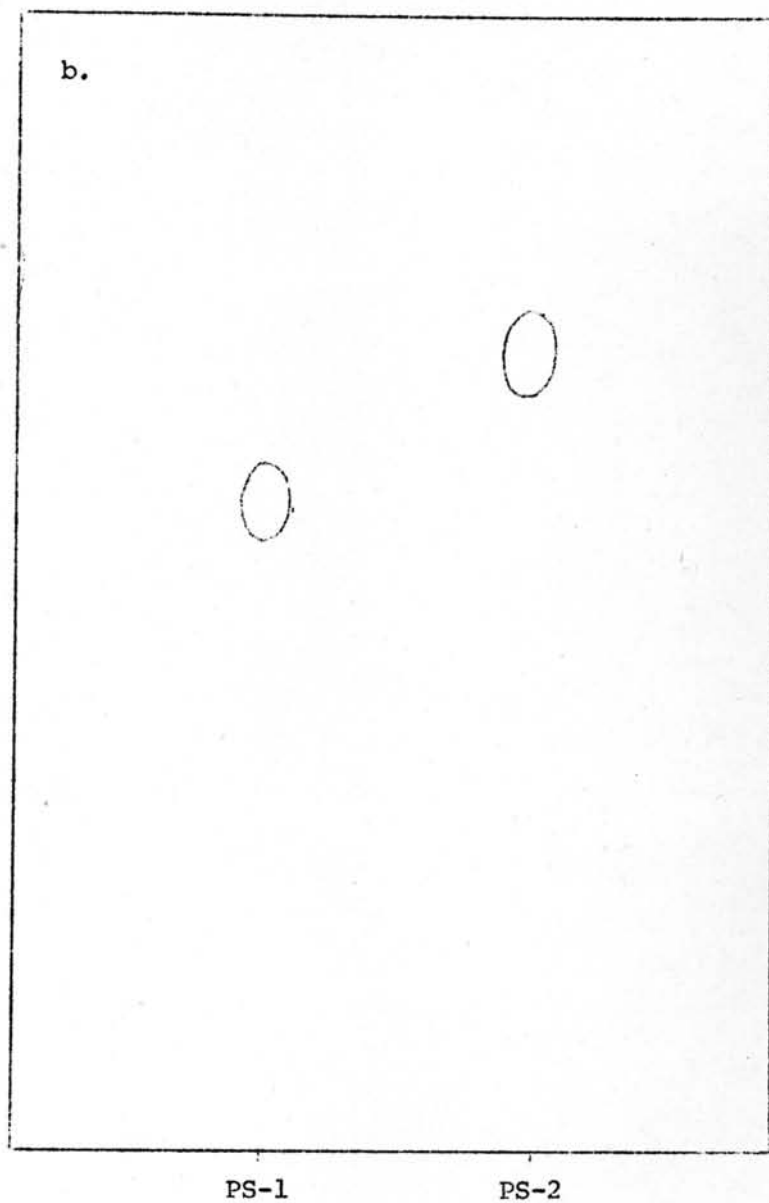


Figure XIX Thin layer chromatogram of dihydroflavonols
PS-1 and PS-2 from the leaves of *Blumea*
balsamifera DC.

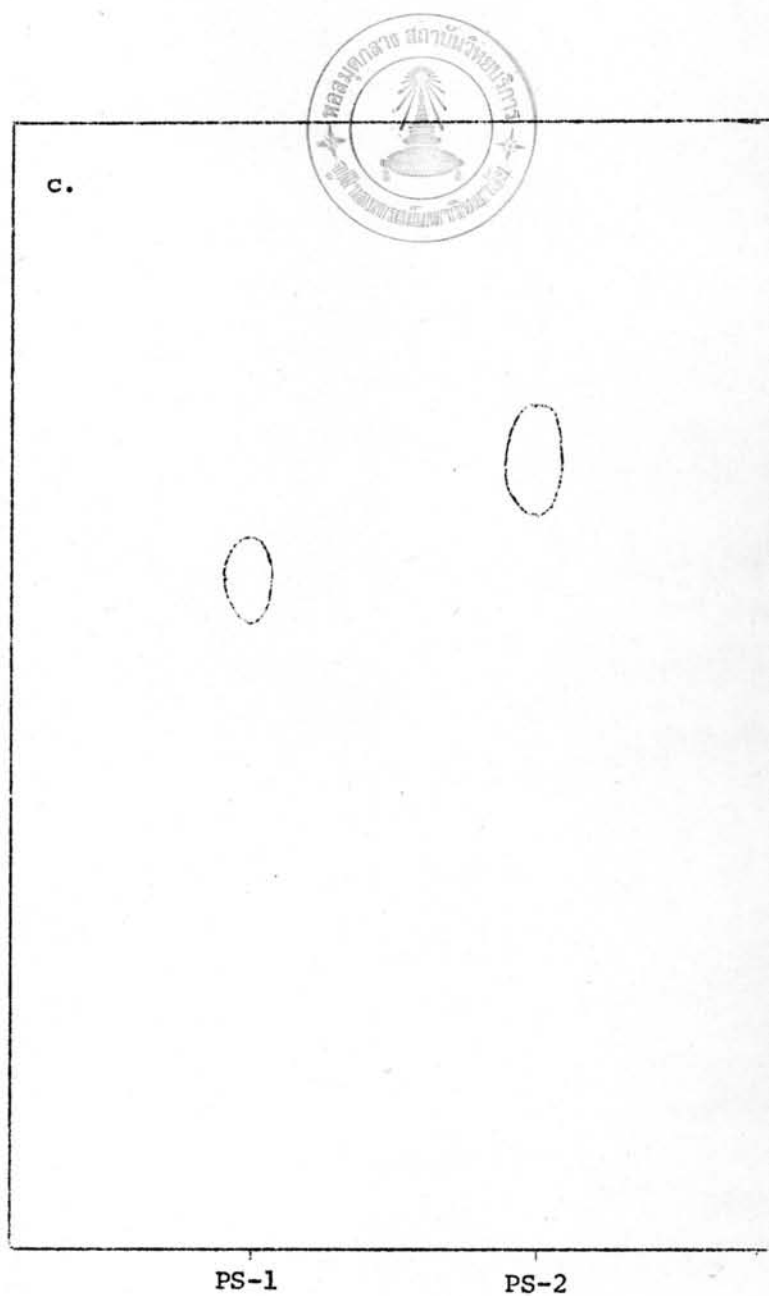


Figure XX Thin layer chromatogram of dihydroflavonols

PS-1 and PS-2 from the leaves of *Blumea balsamifera* DC.

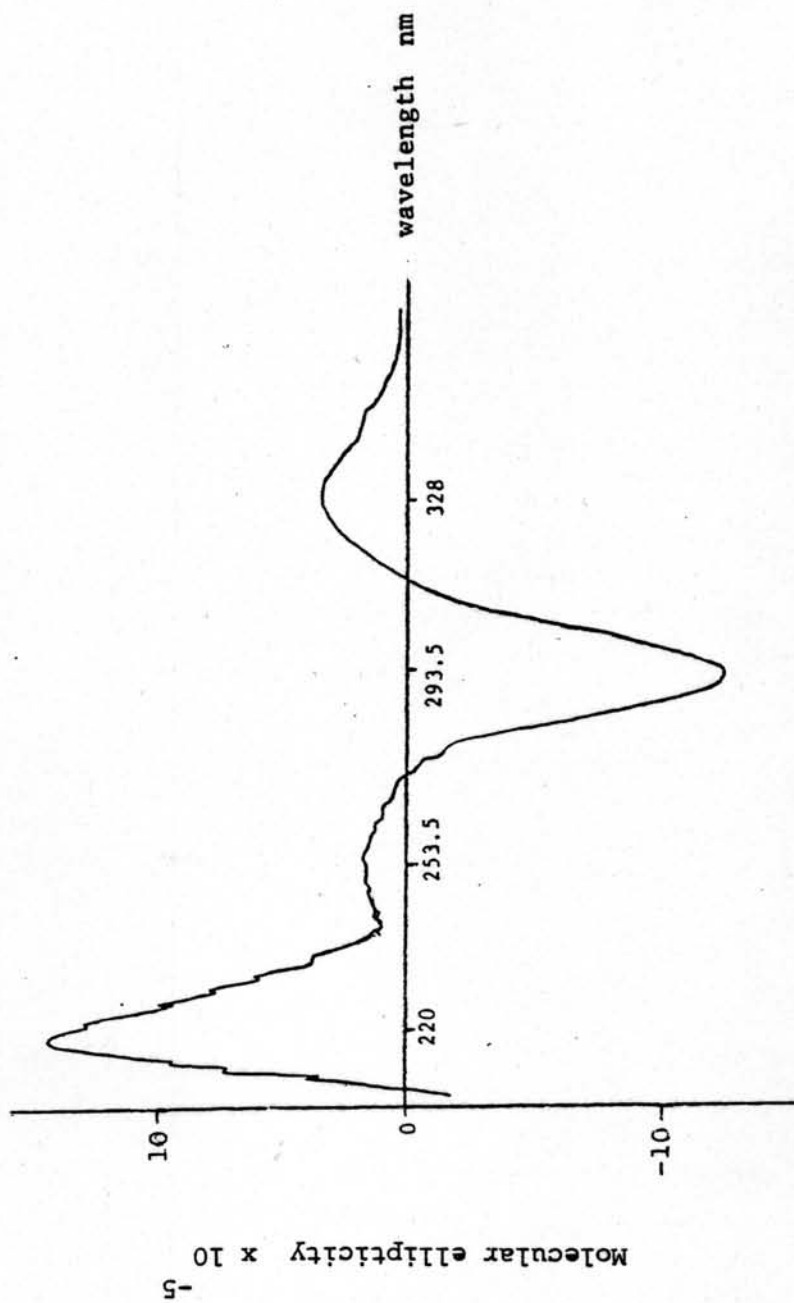


Figure XXI Circular dichroism spectrum of PS-1 in methanol

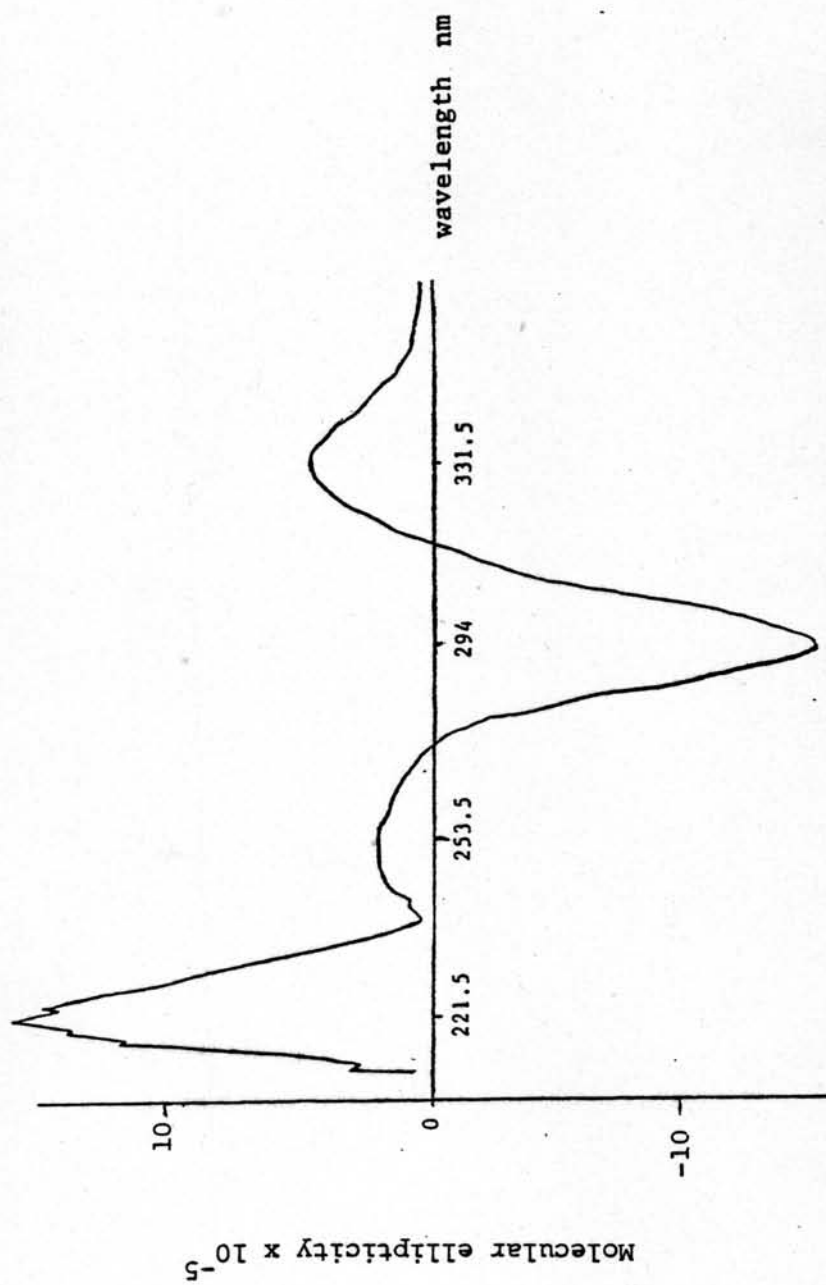


Figure XXII Circular dichroism spectrum of PS-2 in methanol

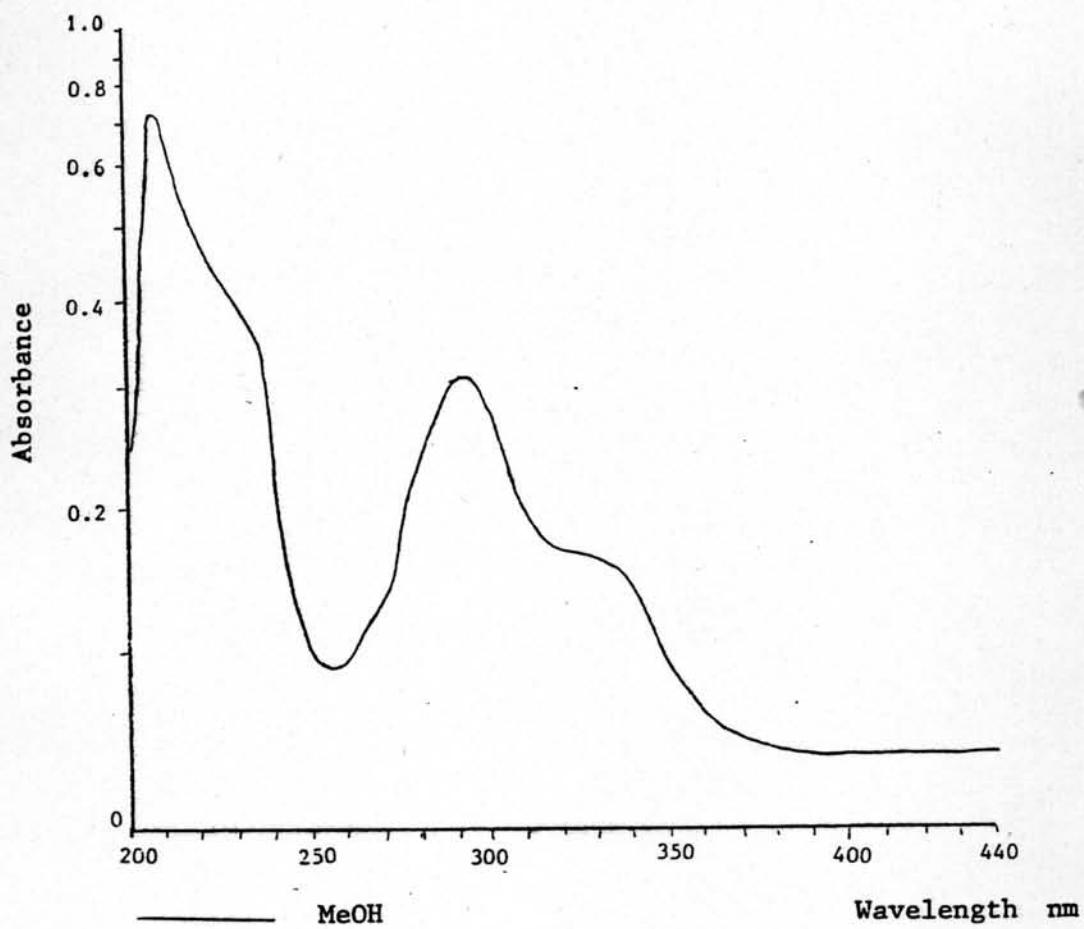


Figure XXIII Ultraviolet absorption spectrum of PS-1

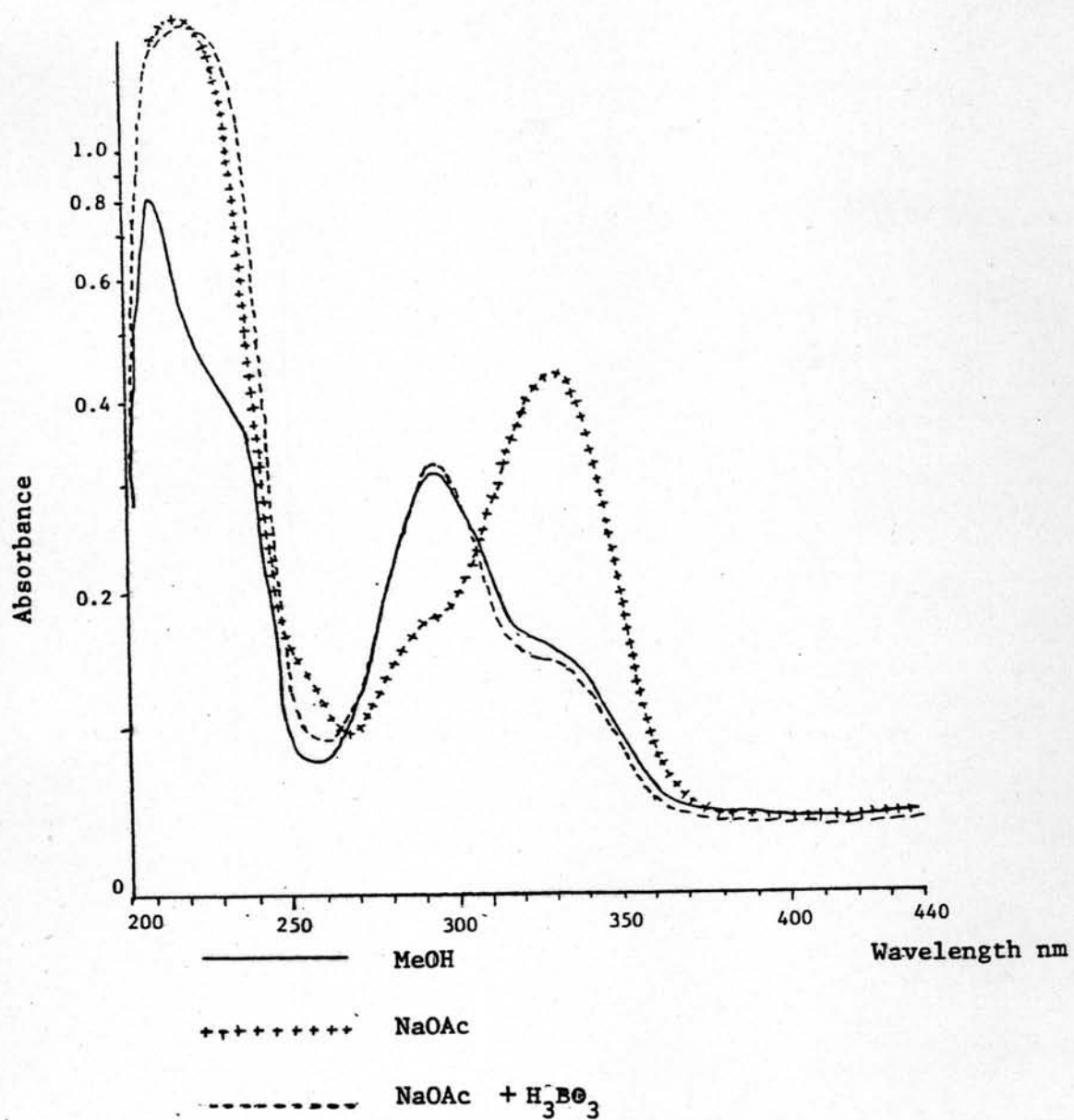


Figure XXIV Ultraviolet absorption spectra of PS-1

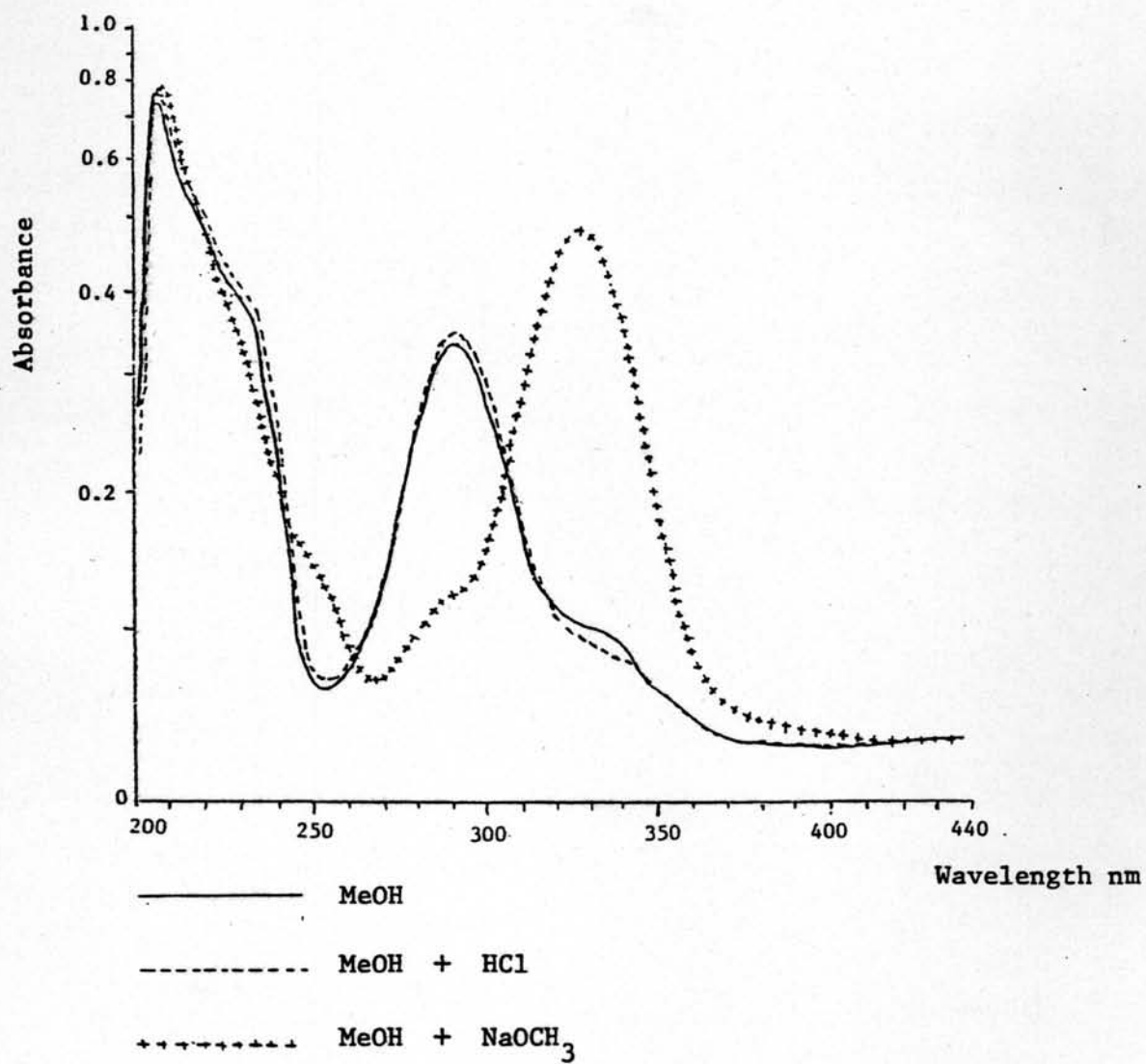


Figure XXV Ultraviolet absorption spectra of PS-1

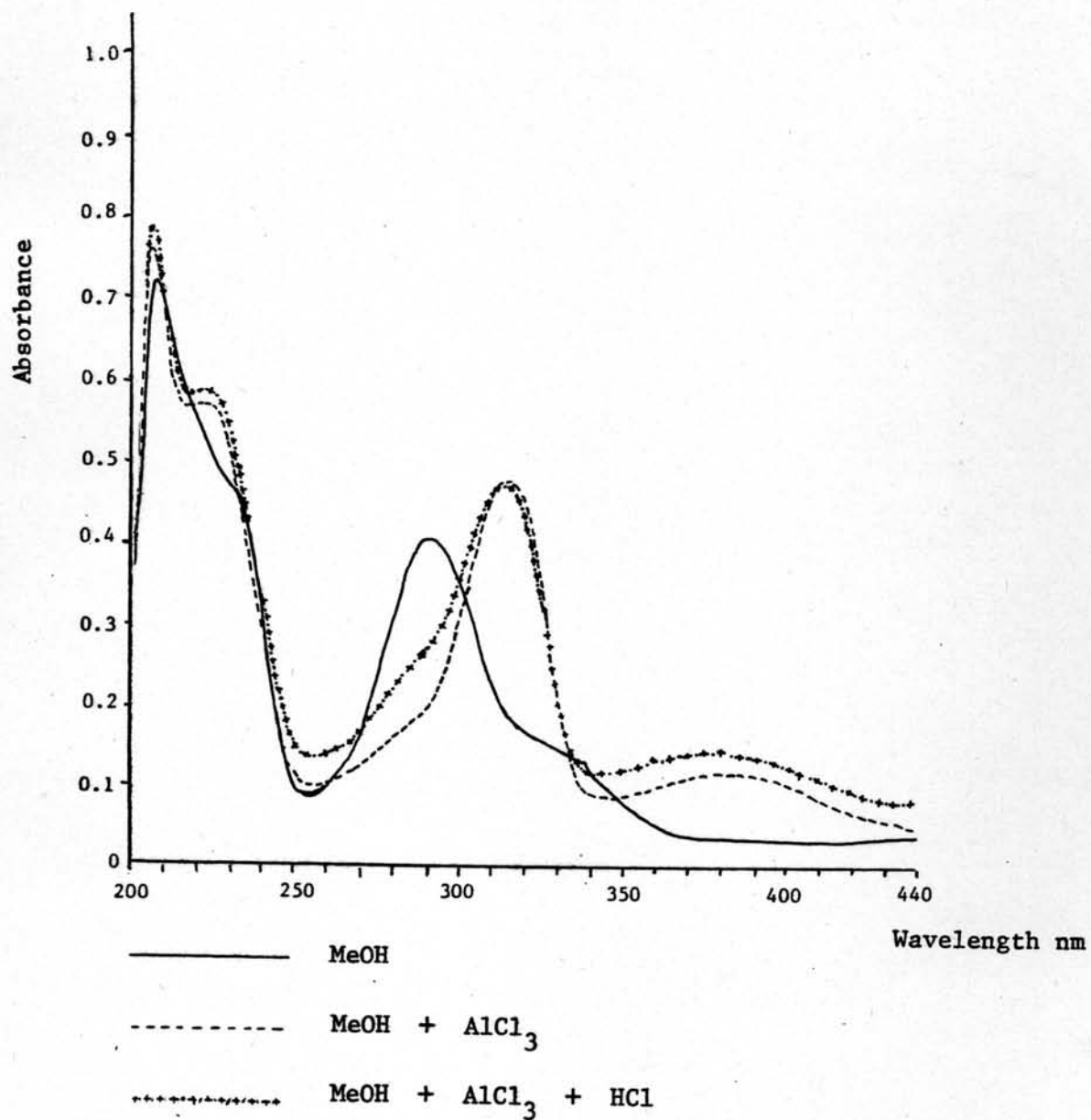


Figure XXVI Ultraviolet absorption spectra of PS-1

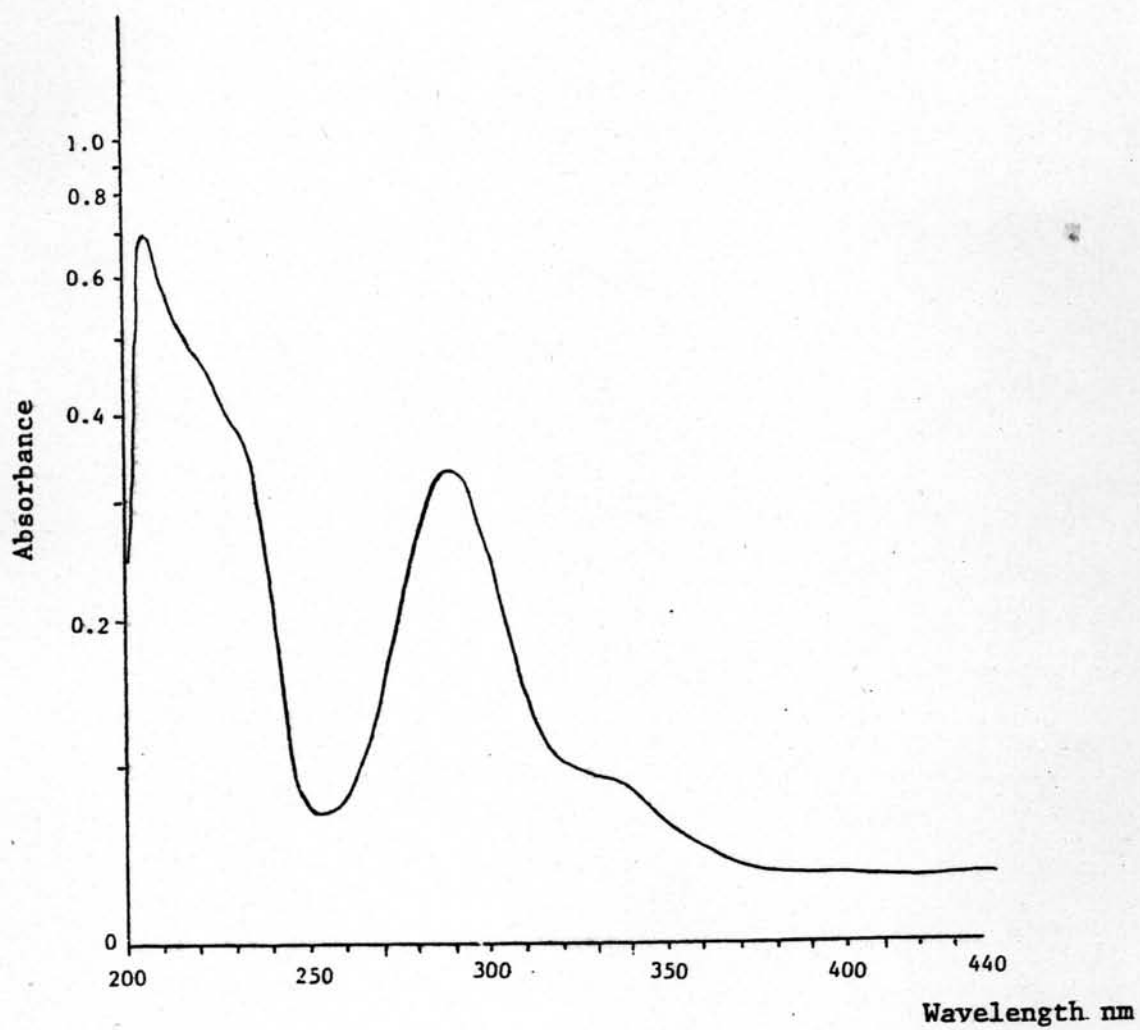


Figure XXVII Ultraviolet absorption spectrum of PS-2
in methanol

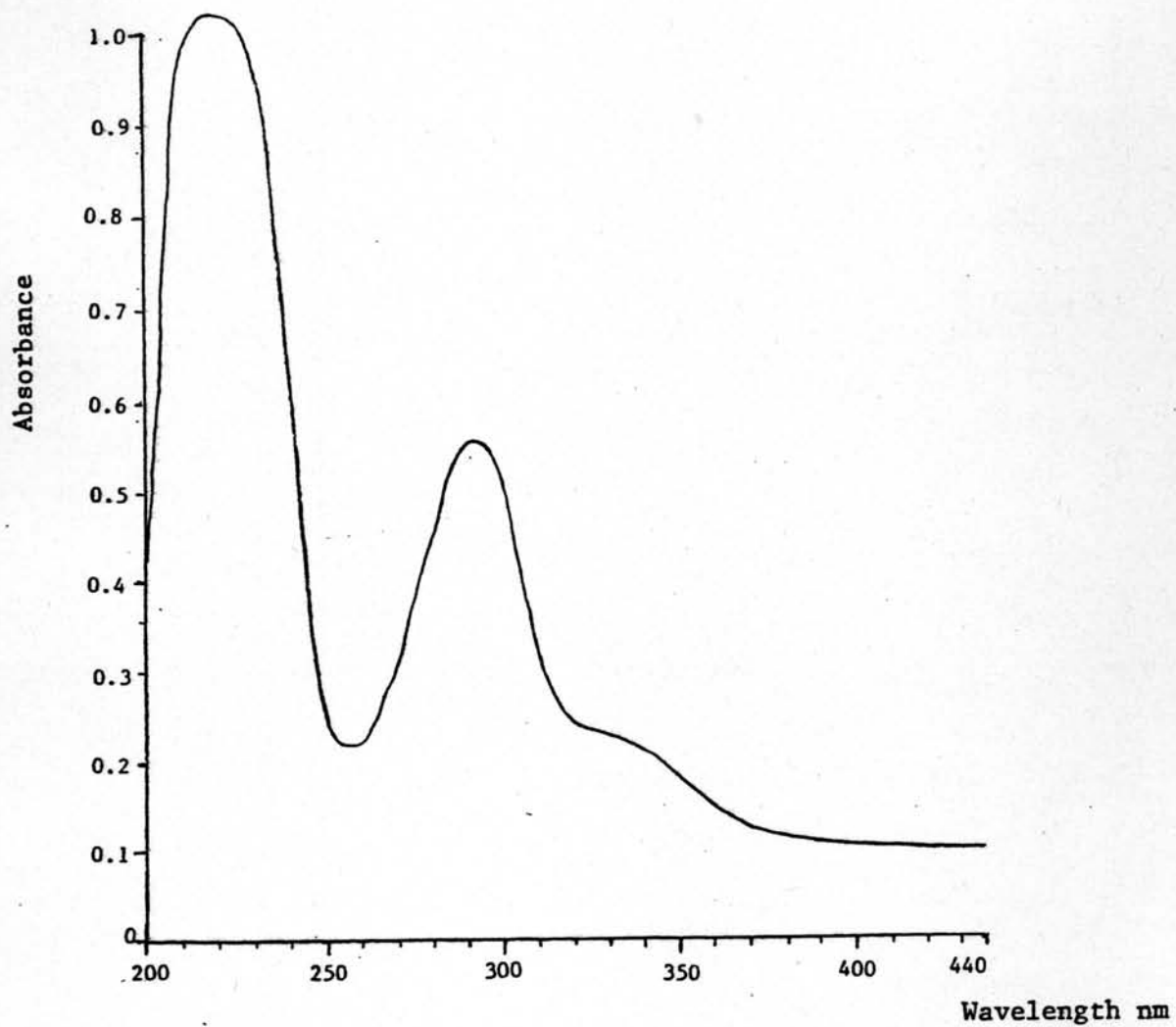
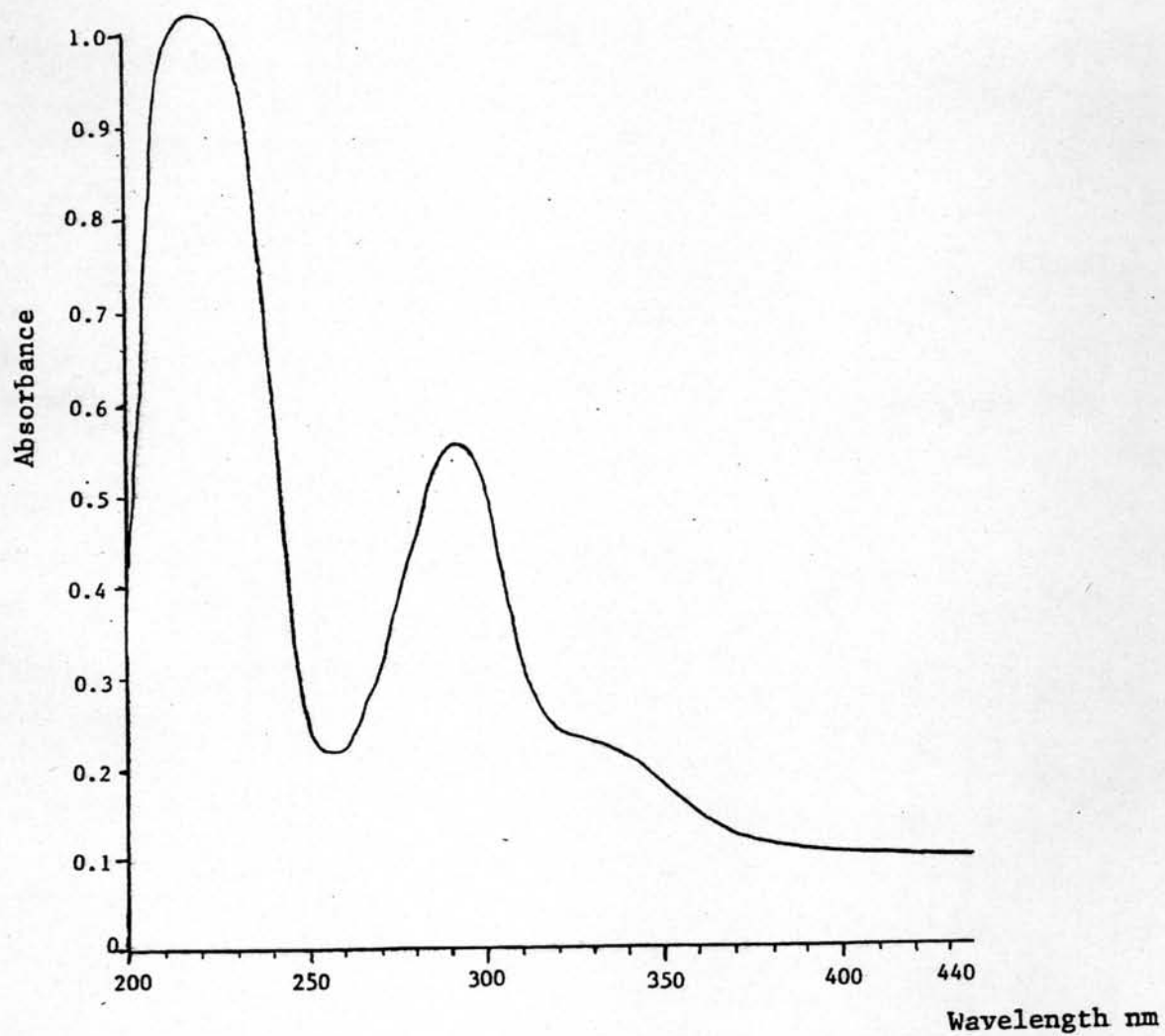


Figure XXVIII Ultraviolet absorption spectrum of PS-2 in
MeOH + NaOAc



Figurec XXIX Ultraviolet absorption spectrum of PS-2
in MeOH + NaOAc + H_3BO_3

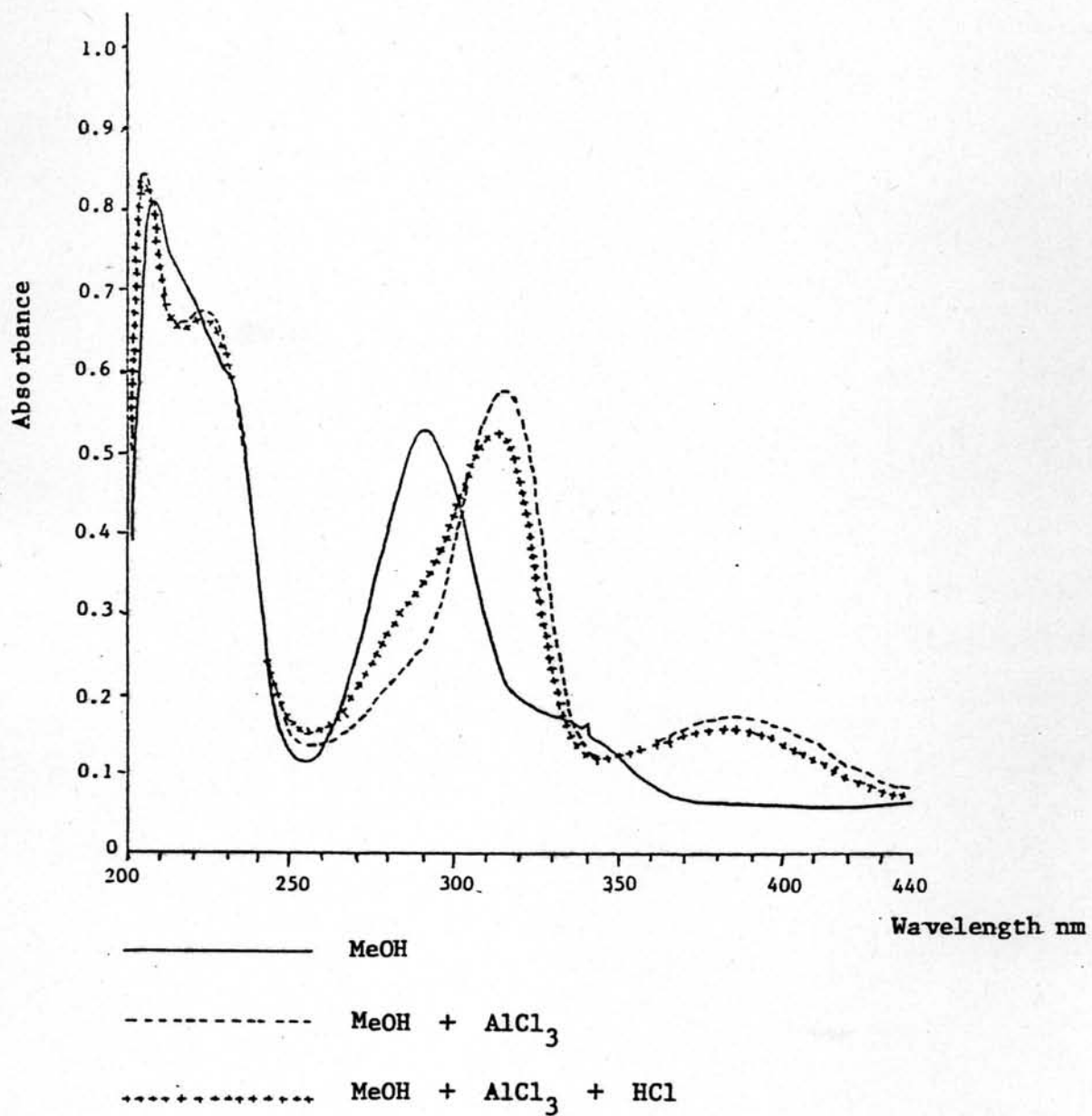


Figure XXX Ultraviolet absorption spectra of PS-2

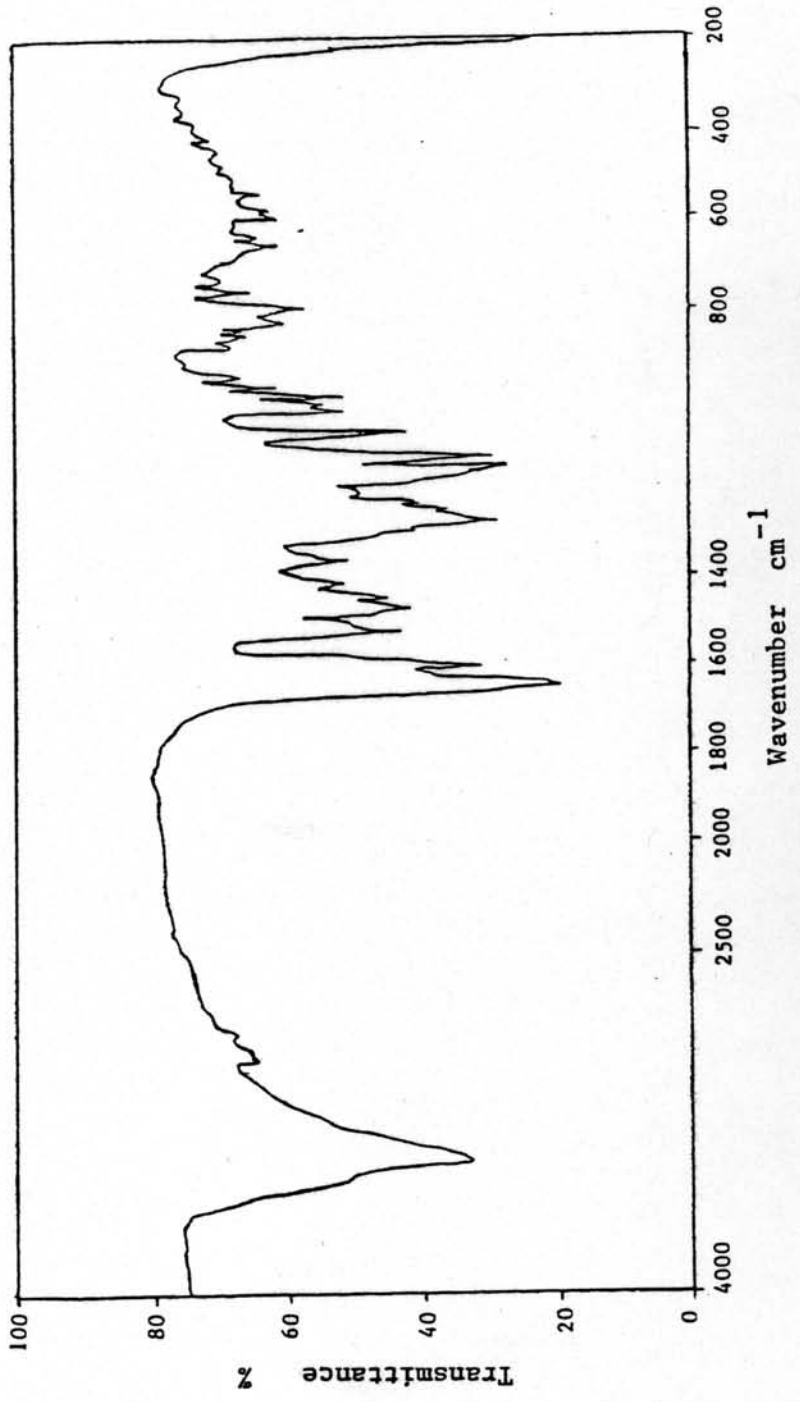


Figure XXXI Infrared absorption spectrum of PS-1 in potassium bromide disc

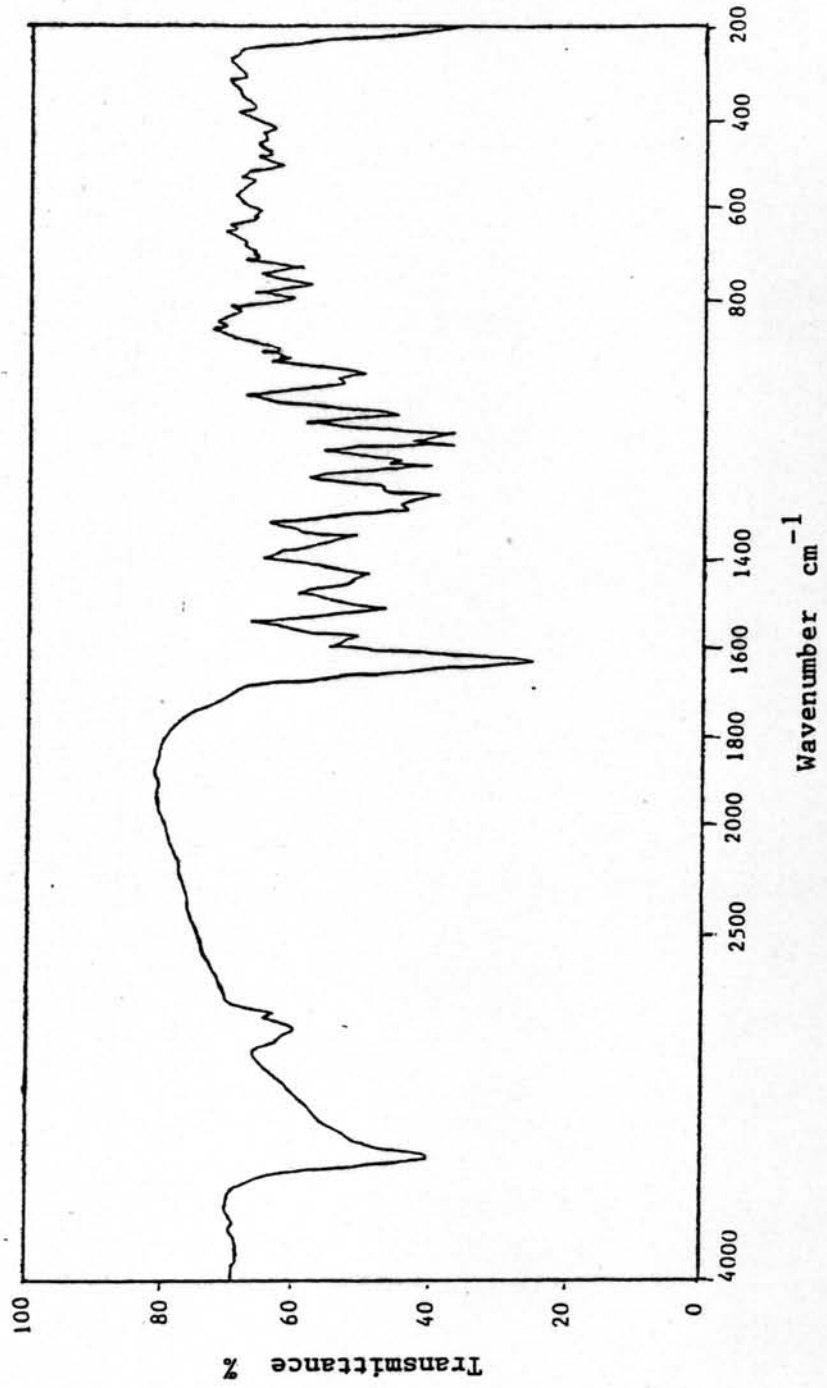
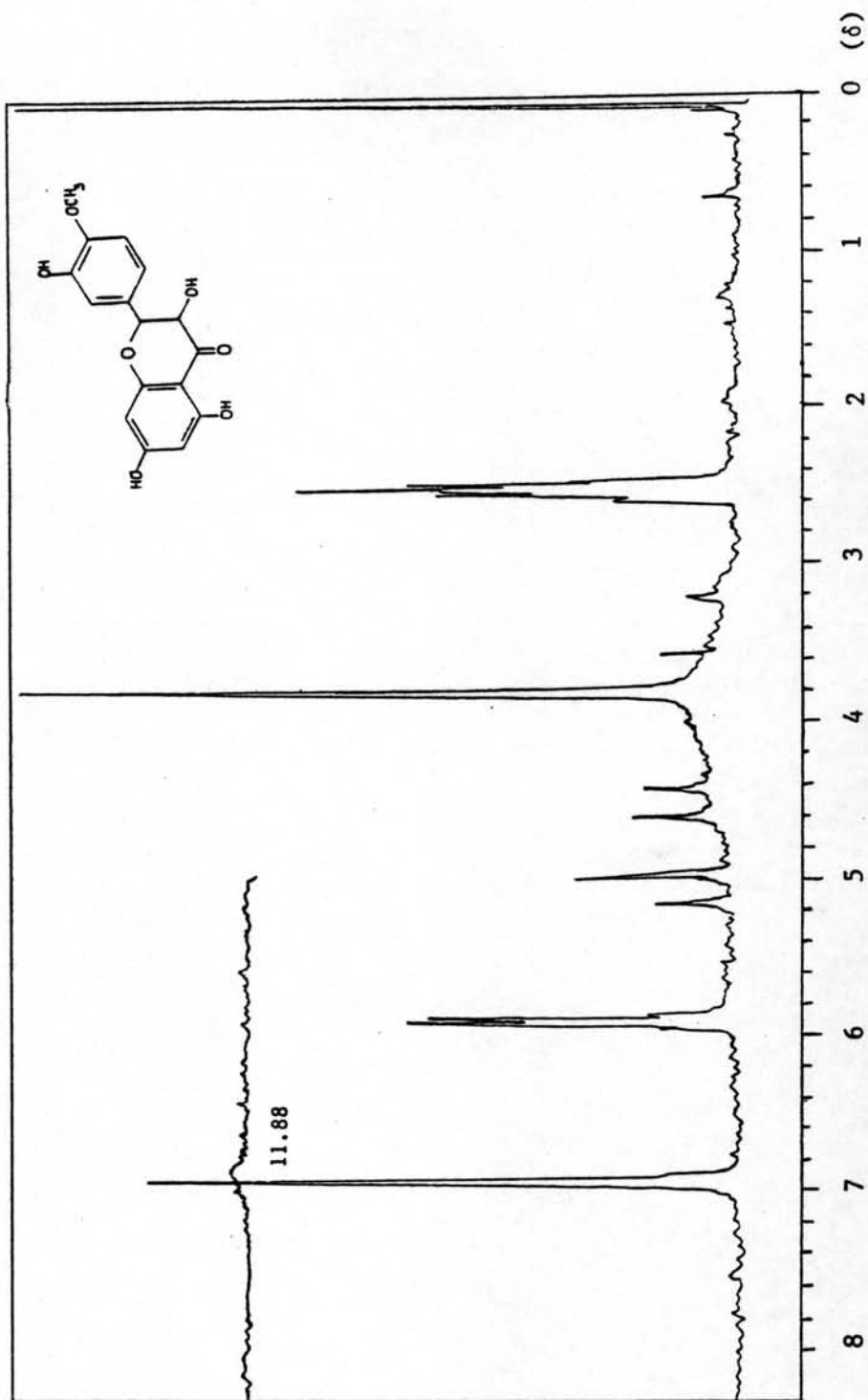
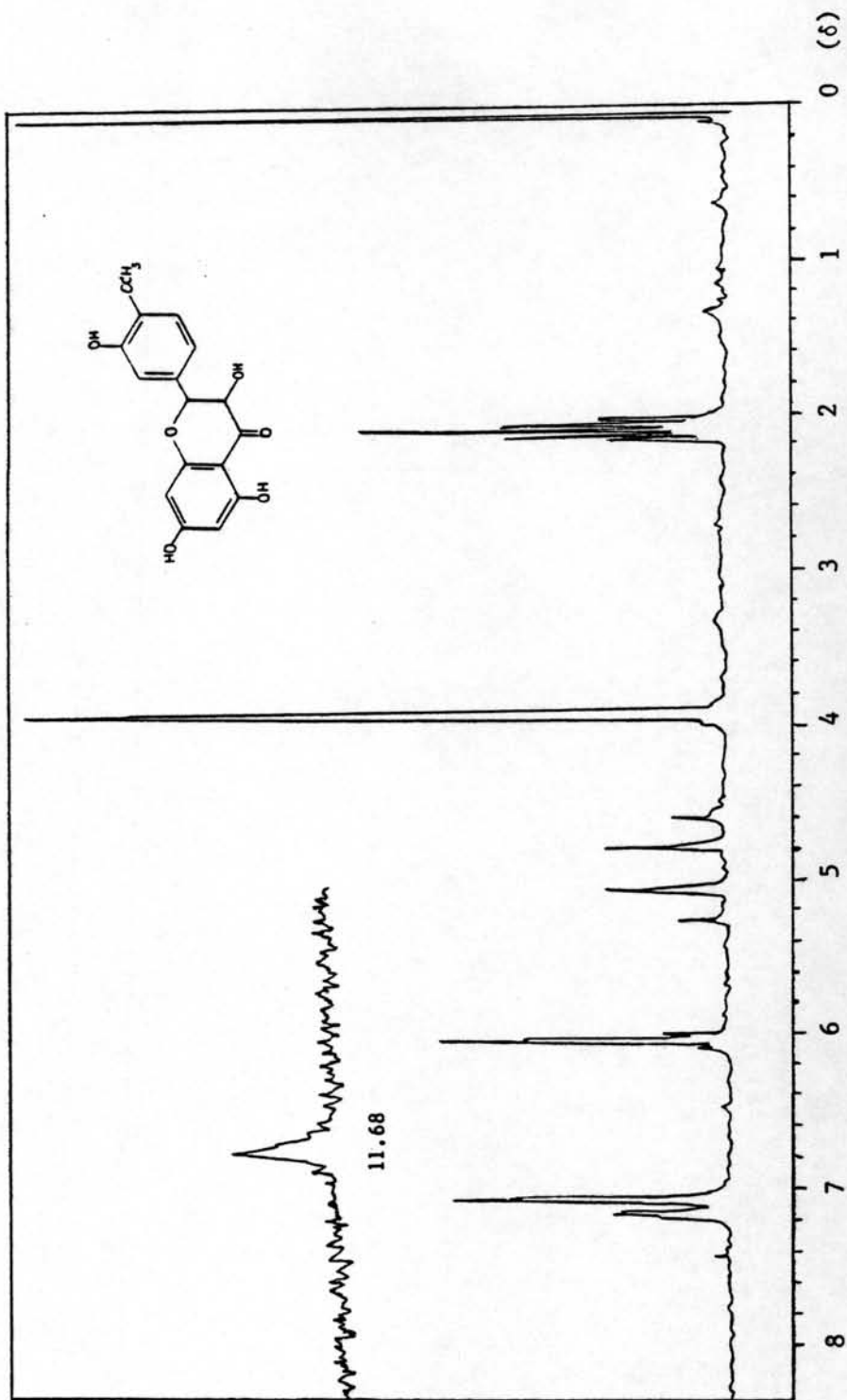
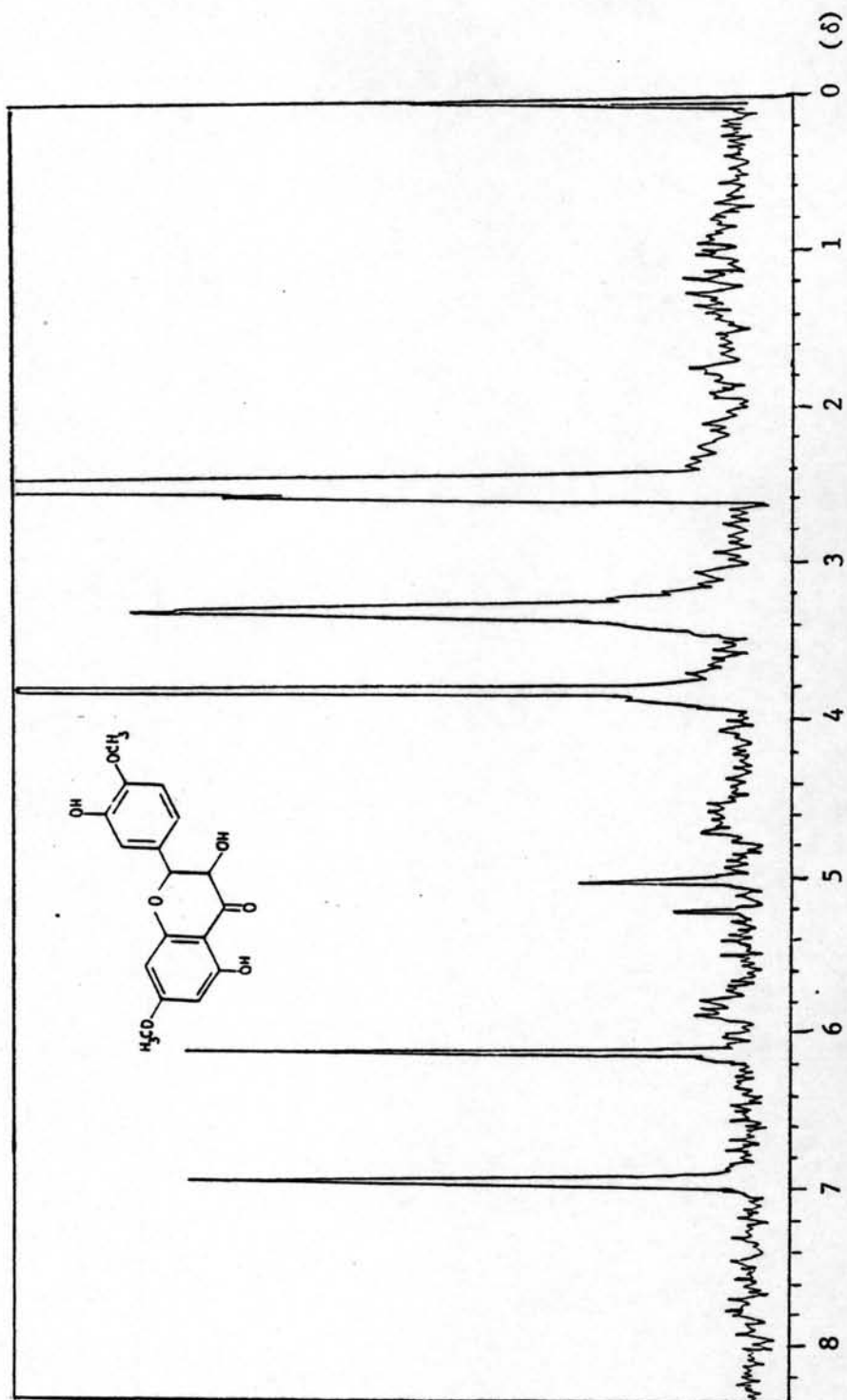


Figure XXXII Infrared absorption spectrum of PS-2 in potassium bromide disc

Figure XXXIII Nuclear magnetic resonance spectrum of PS-1 in DMSO-d₆

Figure XXXIV Nuclear magnetic resonance spectrum of PS-1 in d₆-acetone

Figure XXXV Nuclear magnetic resonance spectrum of PS-2 in DMSO-d₆

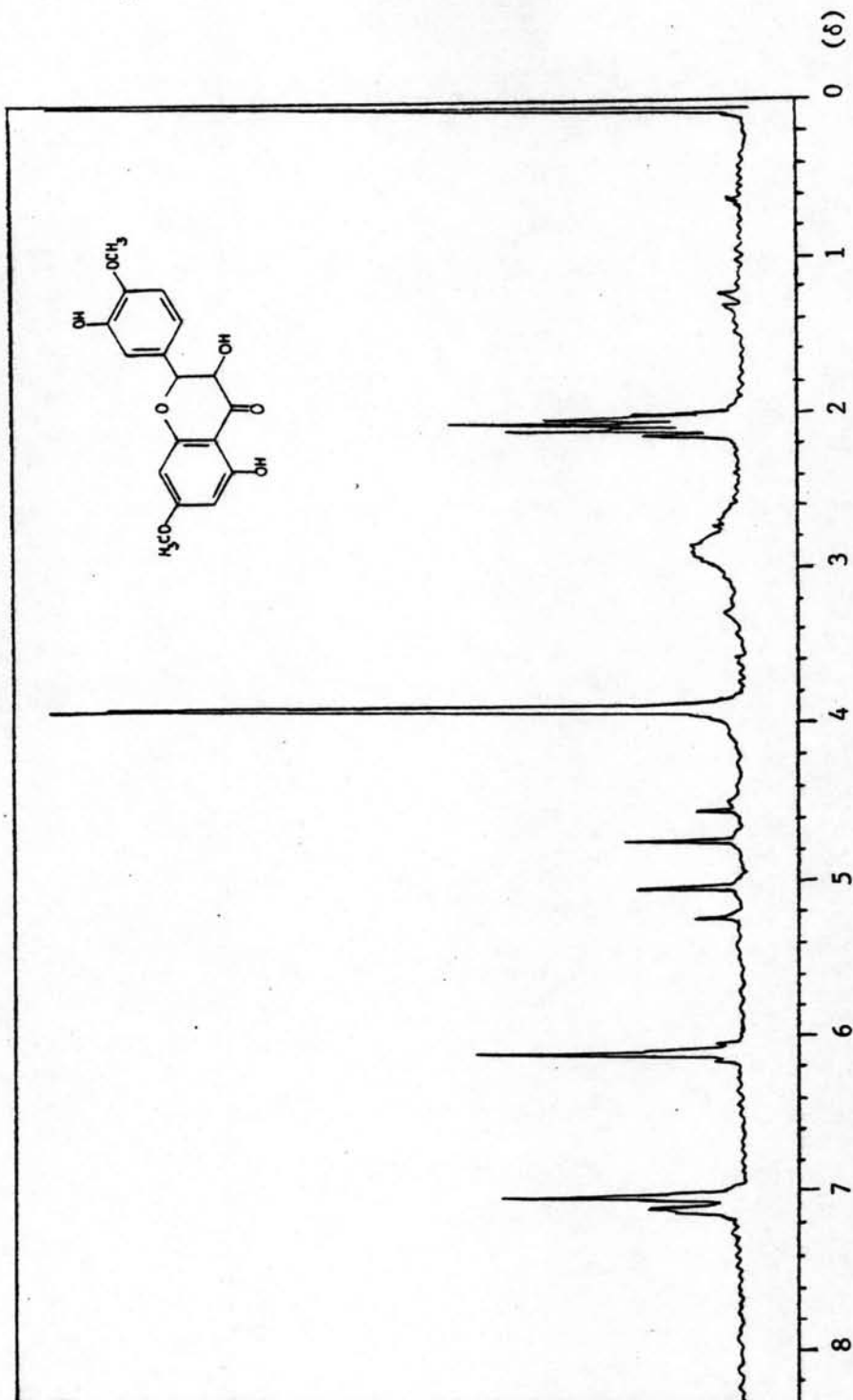


Figure XXXVI Nuclear magnetic resonance spectrum of PS-2 in d₆-acetone

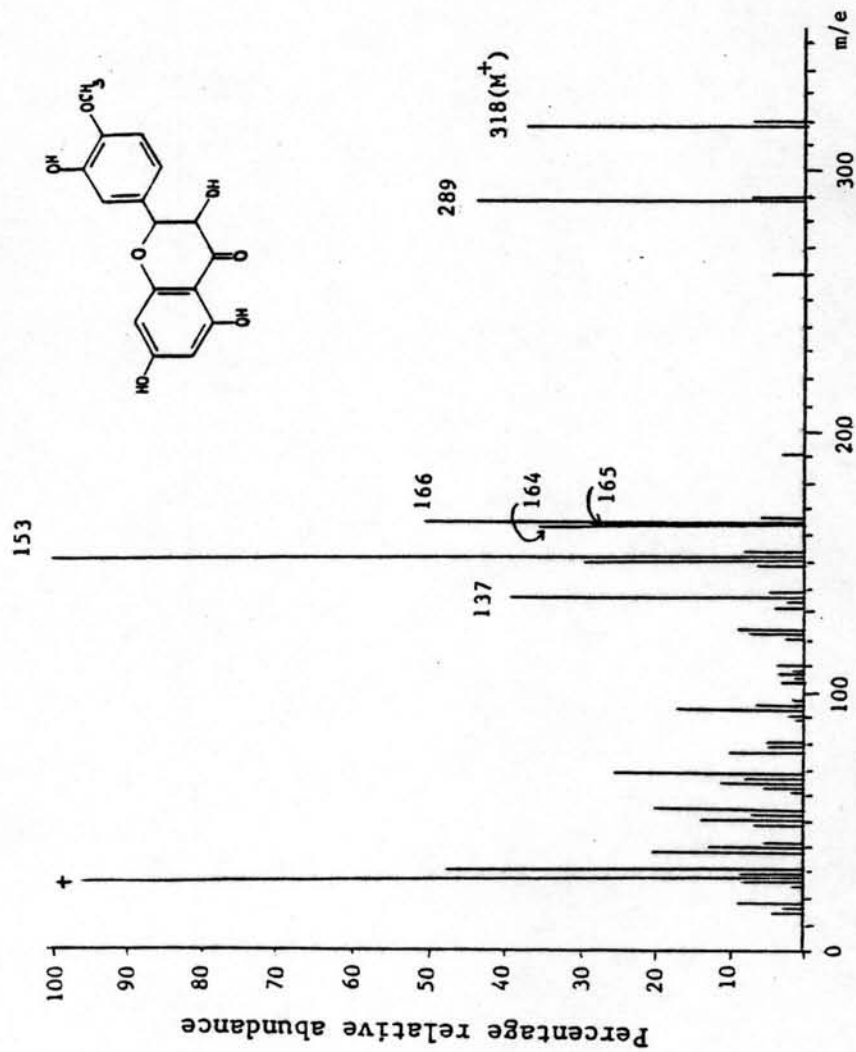


Figure XXXVII Mass spectrum of PS-1

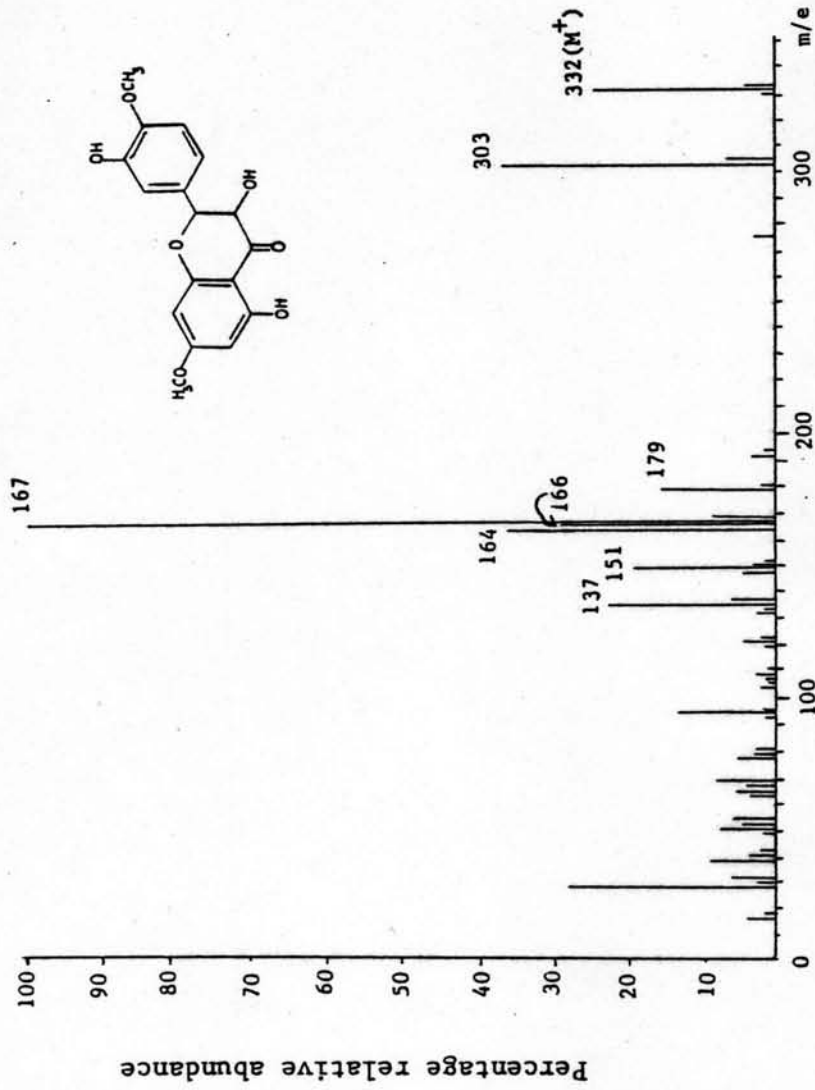


Figure XXXVIII Mass spectrum of PS-2



Figure XXXIX พญา *Blumea balsamifera* DC. COMPOSITAE

(After Kirtikar and Basu 1935)

VITA



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