

FIG. 1. NITRATION OF TOLUENE IN PERCENT DISTRIBUTION

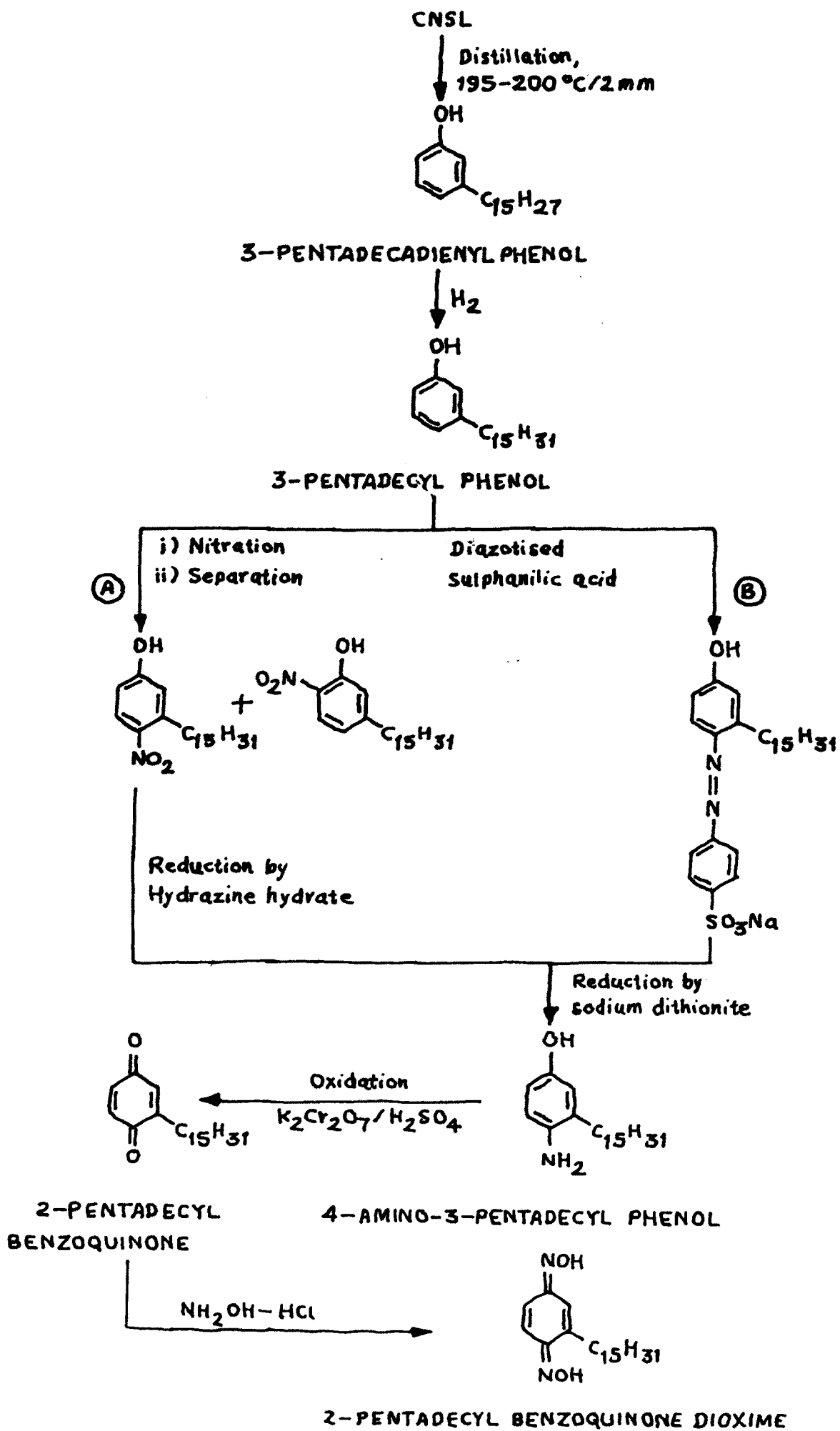
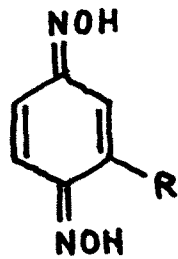
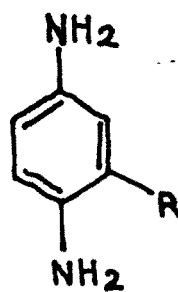
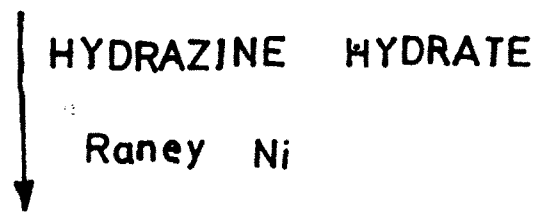


FIG-2. PREPARATION OF 2-PENTADECYL BENZOQUINONE DIOXIME



BENZOQUINONE DIOXIME



1,4-BENZENEDIAMINE

Where $R = \text{CH}_3$ and $\text{C}_{15}\text{H}_{31}$

FIG. 3 . SYNTHESIS OF DIAMINES

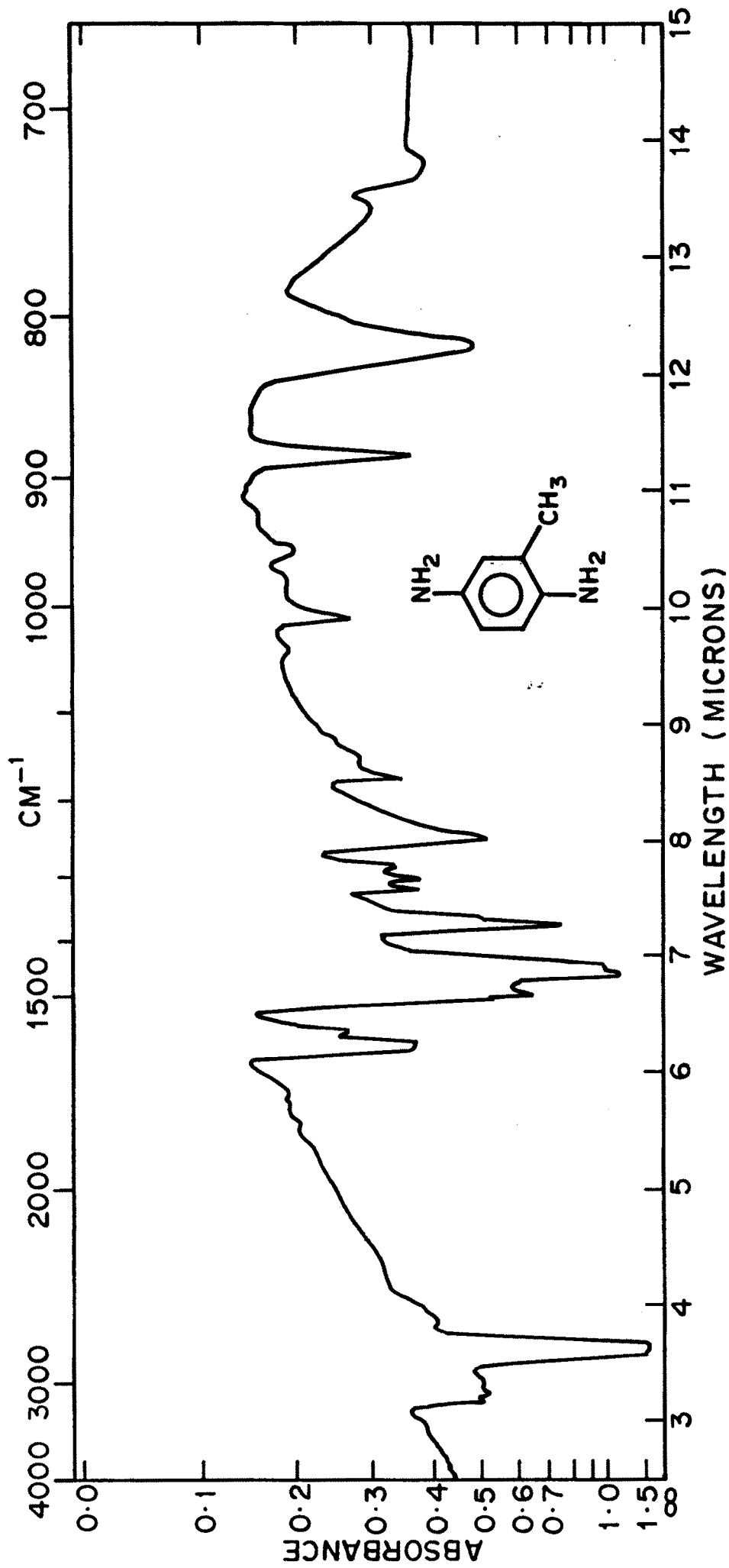


FIG. 4. IR SPECTRUM OF 2-METHYL 1,4-BENZENEDIAMINE

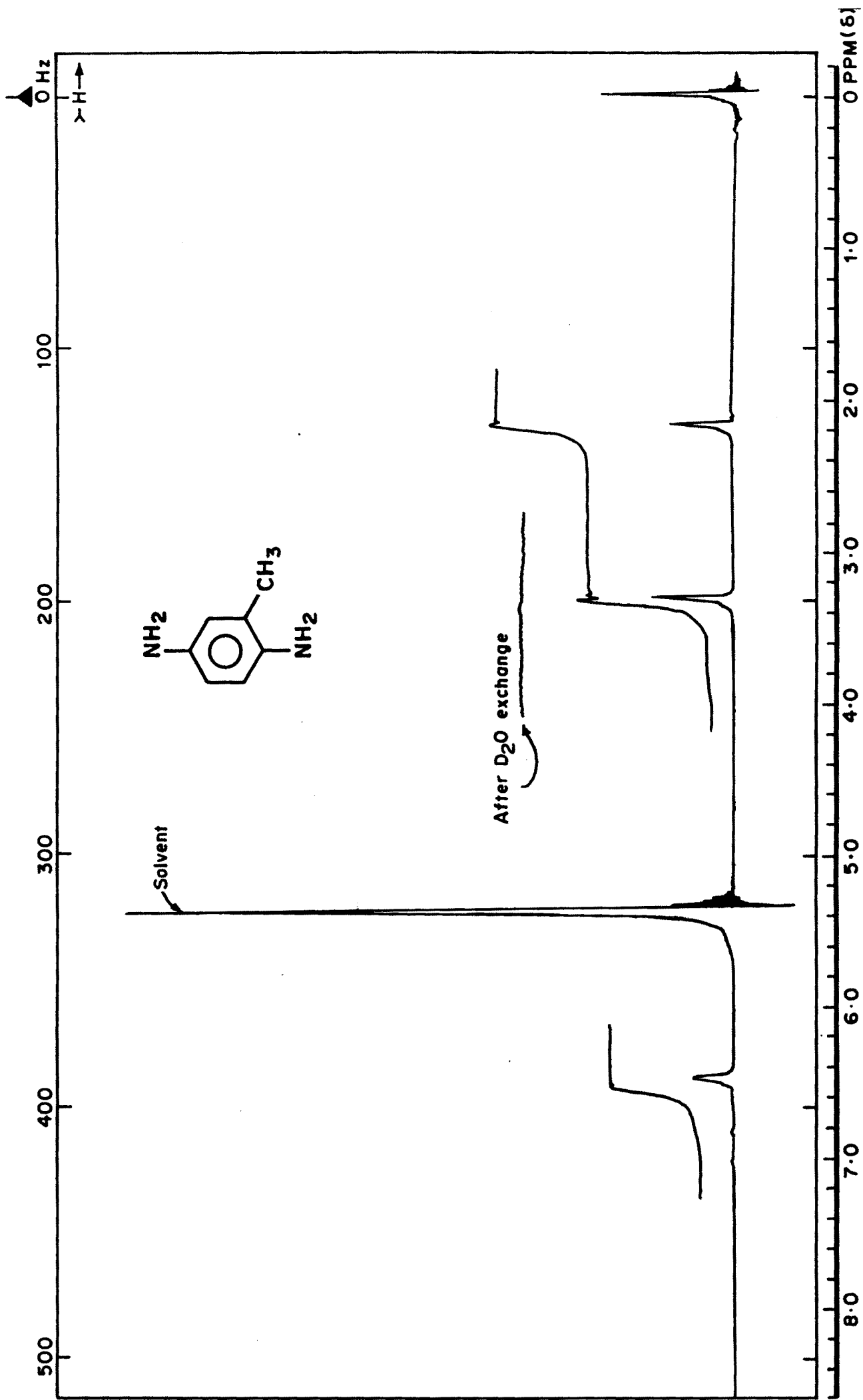


FIG. 5 . NMR SPECTRUM OF 2-METHYL 1,4-BENZENEDIAMINE IN DICHLOROMETHANE

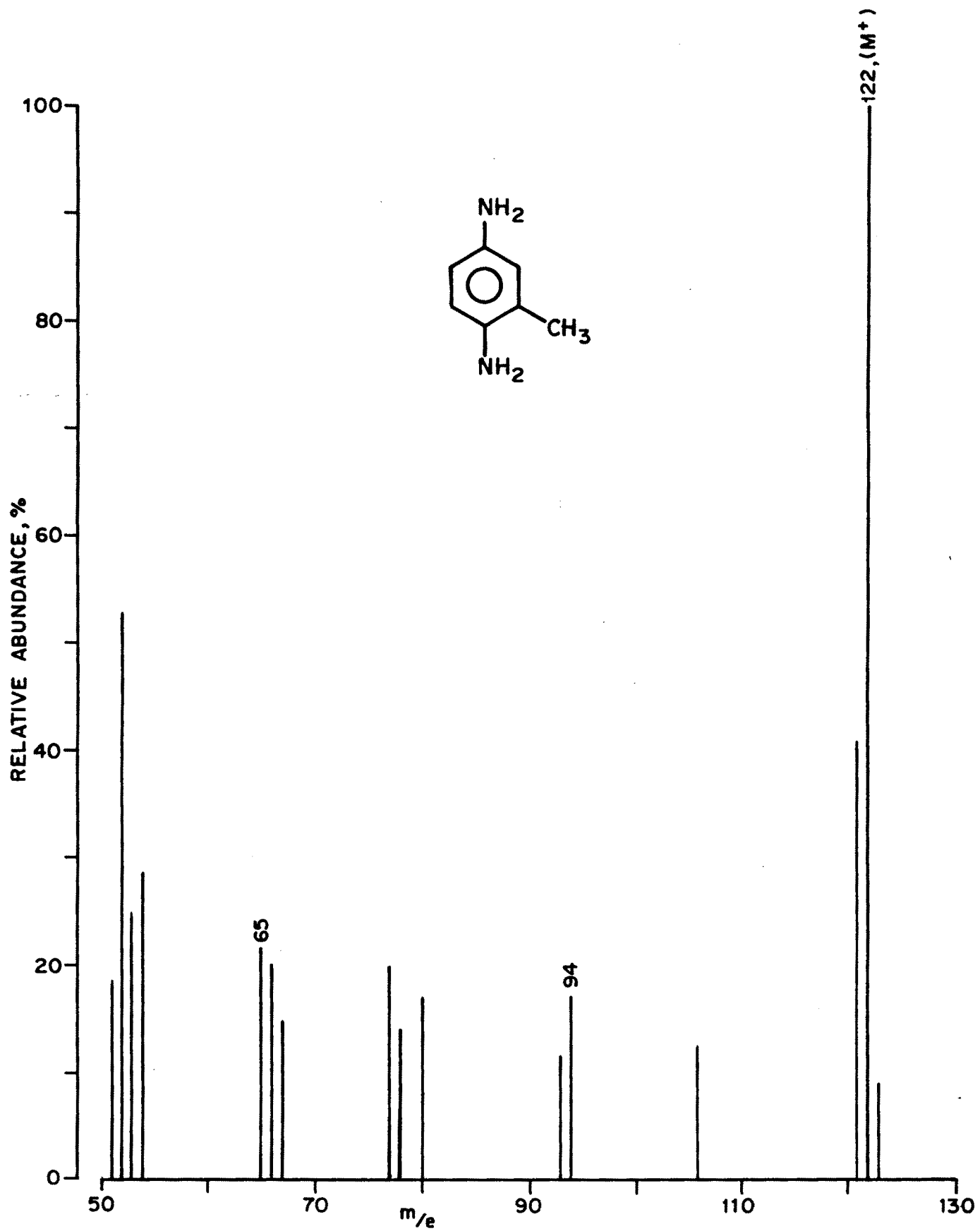


FIG. 6. MASS SPECTRUM OF 2-METHYL 1,4-BENZENEDIAMINE

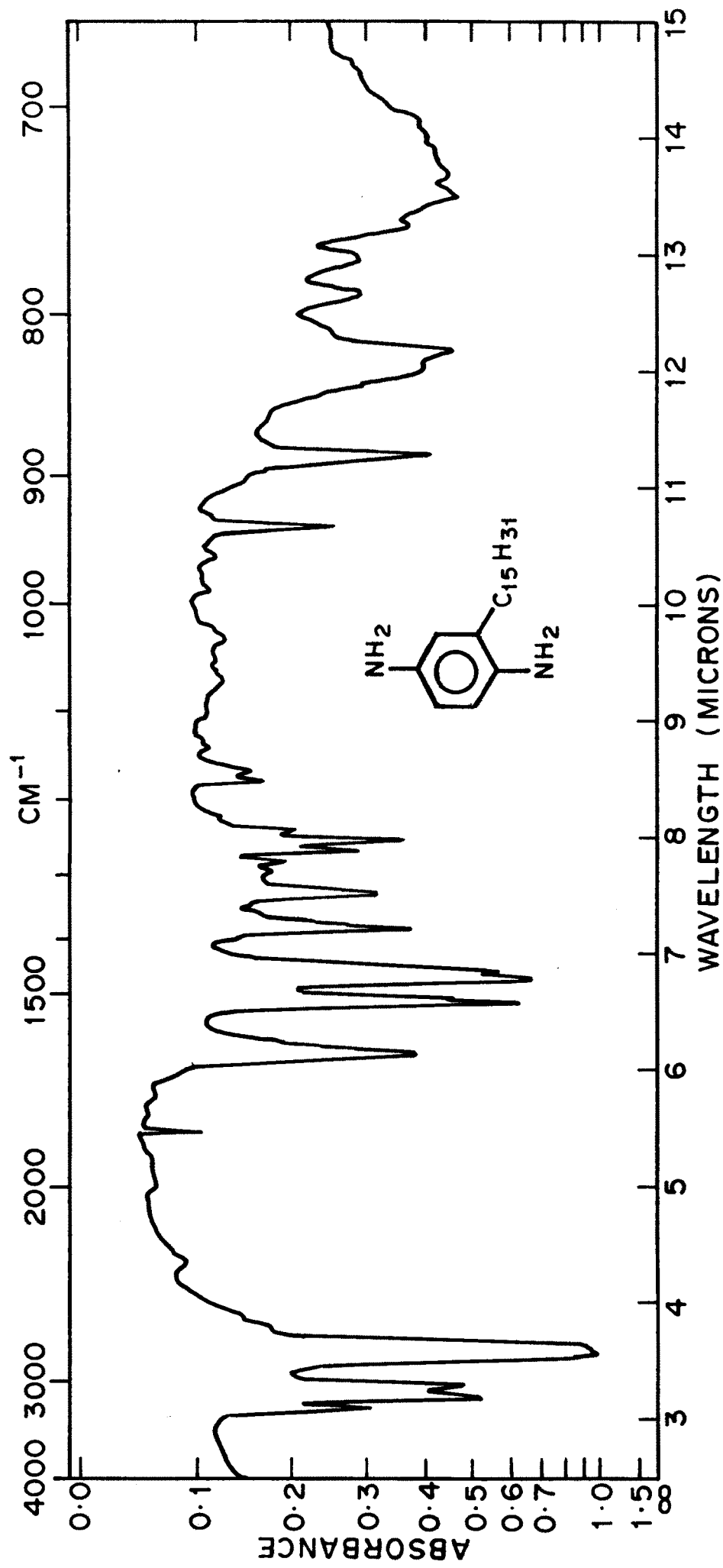


FIG. 7. IR SPECTRUM OF 2-PENTADECYL 1,4-BENZENEDIAMINE

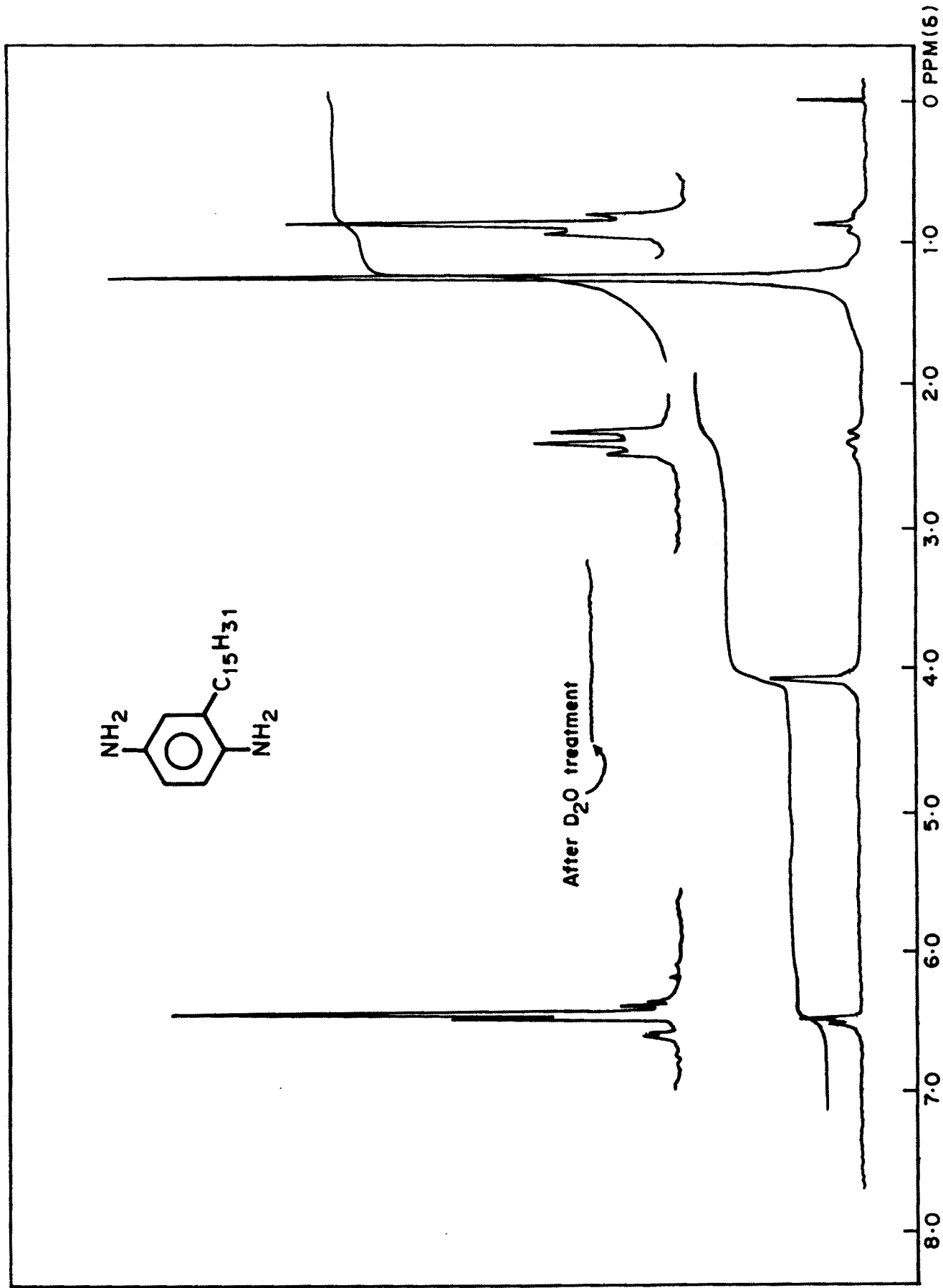


FIG. 8. NMR SPECTRUM OF 2-PENTADECYL 1,4-BENZENEDIAMINE

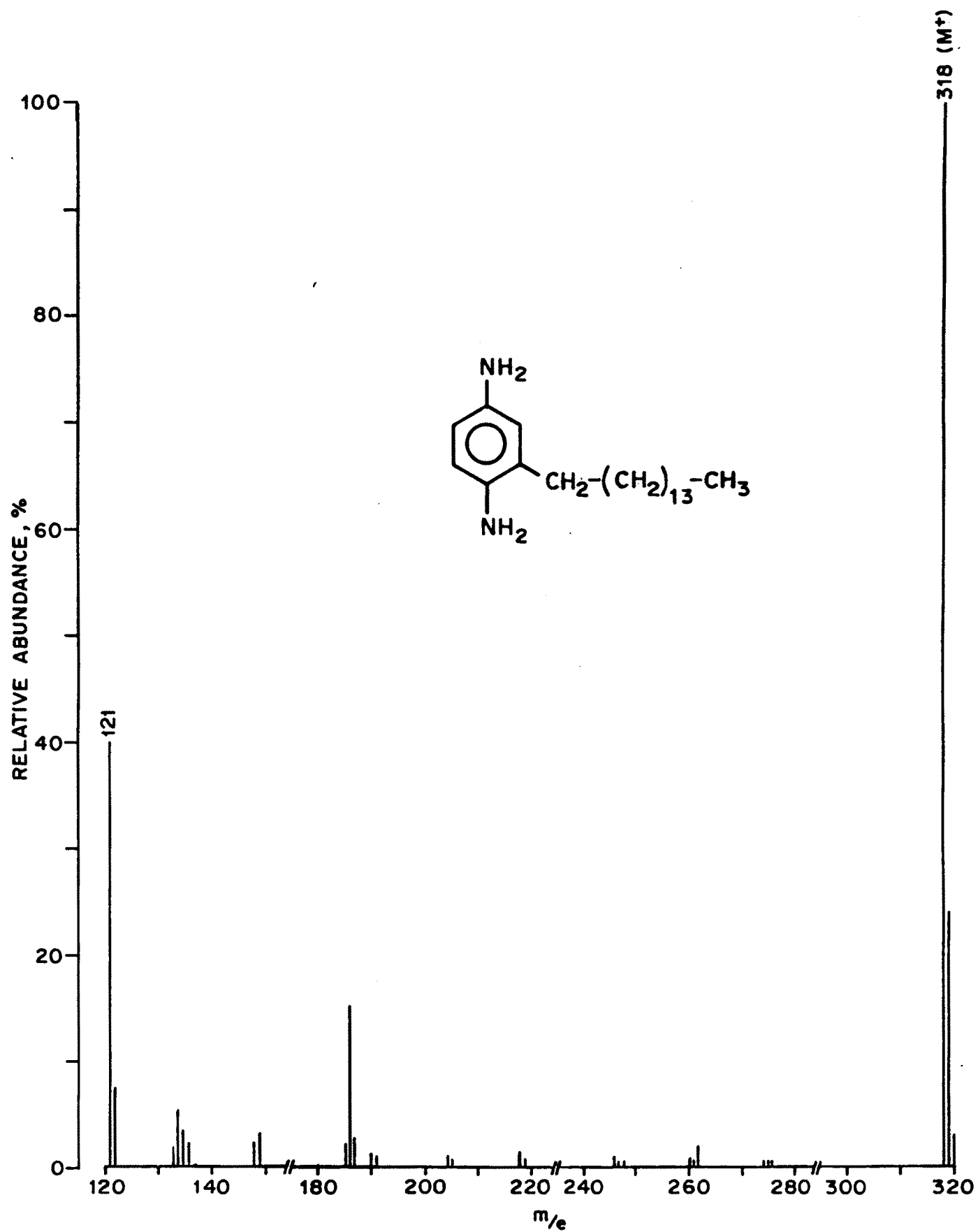
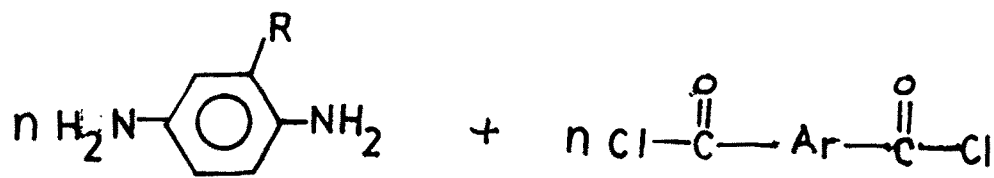


FIG. 9. MASS SPECTRUM OF 2-PENTADECYL 1,4-BENZENEDIAMINE



DIAMINE

DIACID

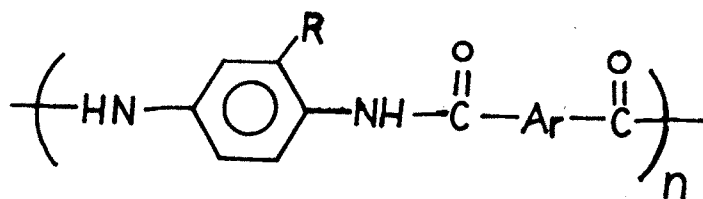
CHLORIDE

Interfacial
Polymerisation

$n \text{ Na}_2\text{CO}_3$
 $- 2n \text{ NaCl}$

Solution
Polymerisation

Amide Solvent
 $- 2n \text{ Amide HCl}$



POLYAMIDE

Where,

$\text{R} = \text{H}, -\text{CH}_3, -\text{C}_{15}\text{H}_{31}$

$\text{Ar} =$

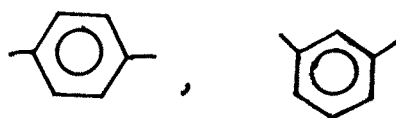


FIG. 10. SCHEME FOR POLYAMIDE SYNTHESIS.

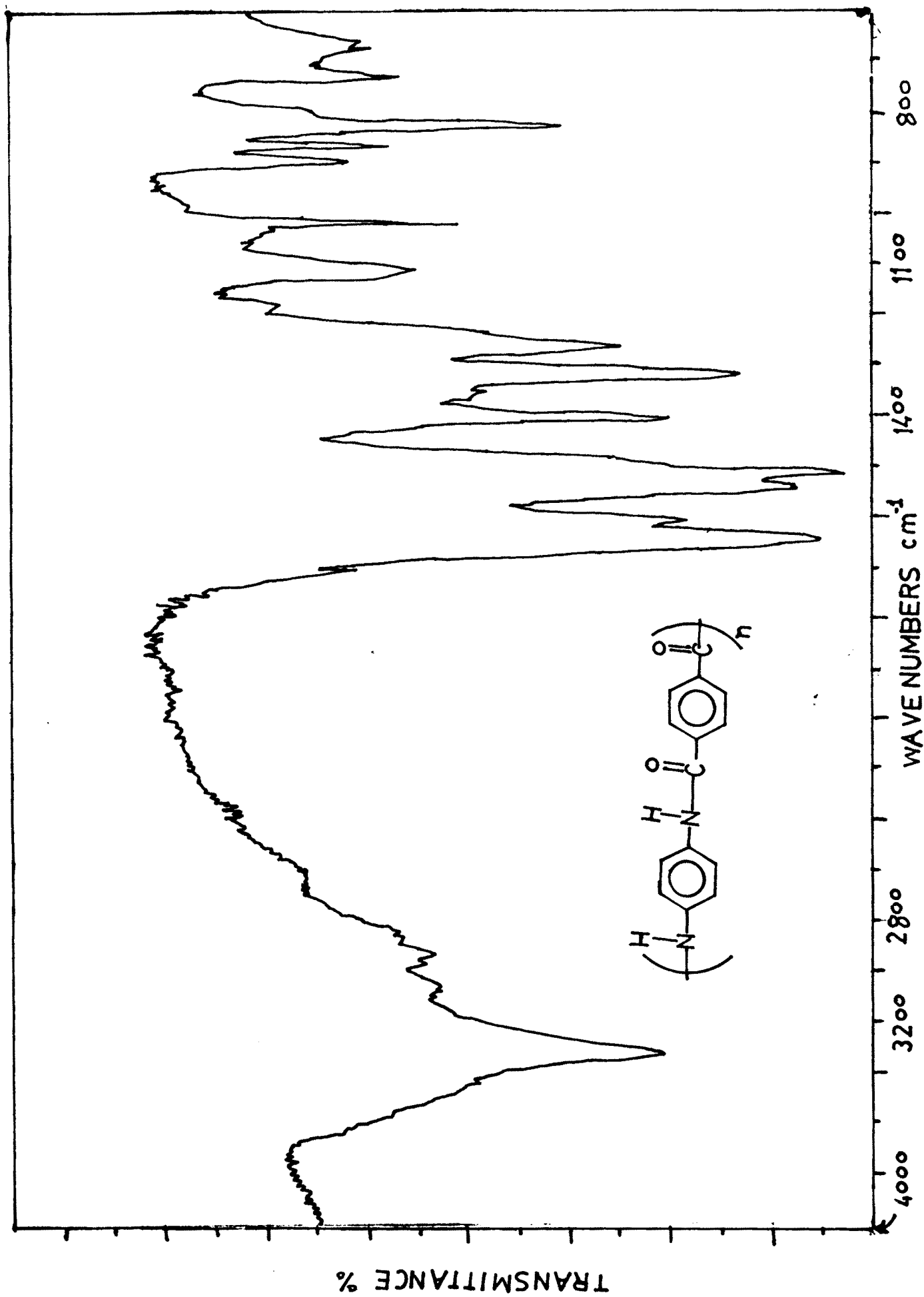


FIG. 11 IR SPECTRUM OF POLYAMIDE [C] FROM BDA AND TPC

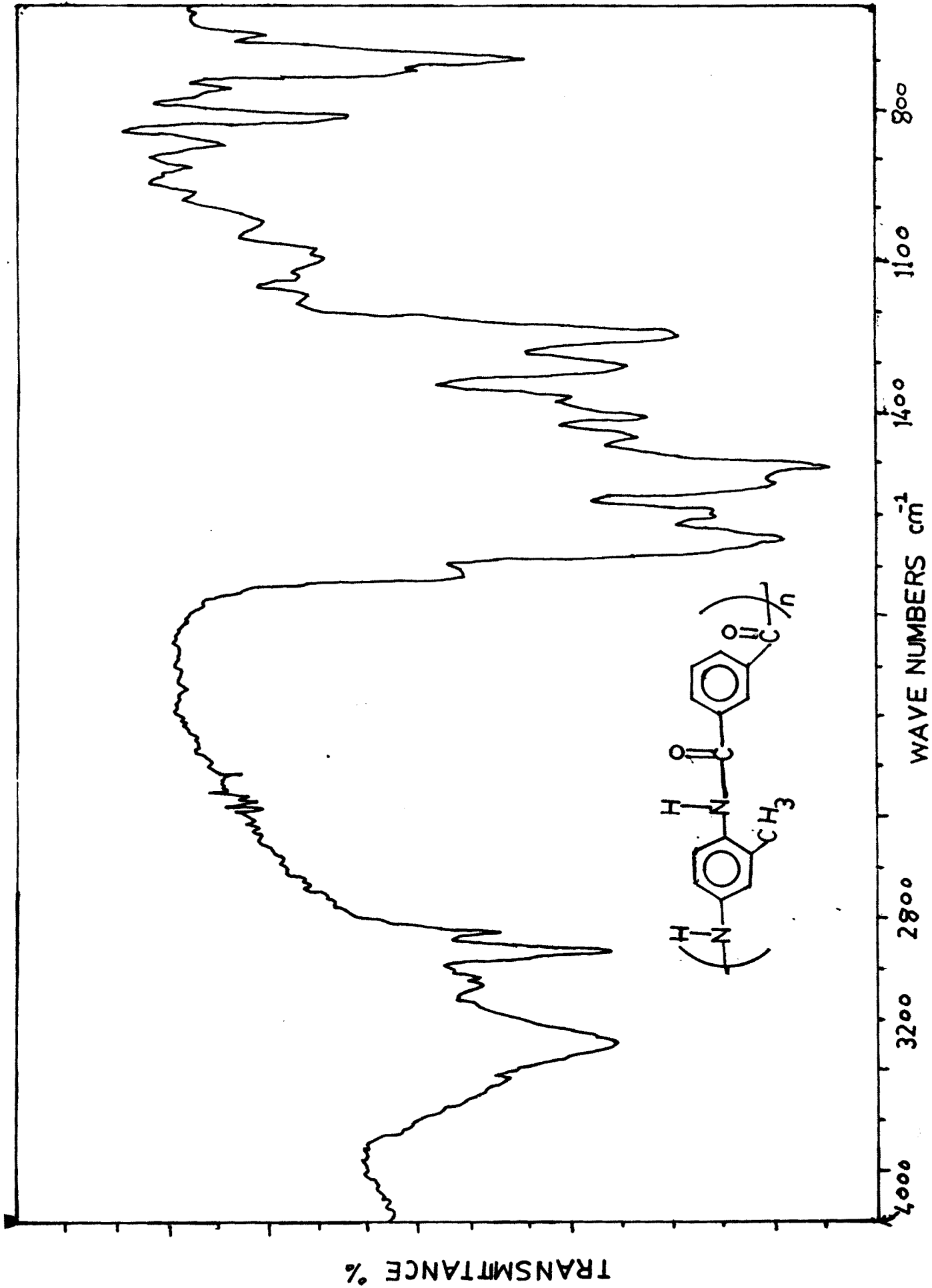


FIG. 12. IR SPECTRUM OF POLYAMIDE [G] FROM MBDA AND IPC

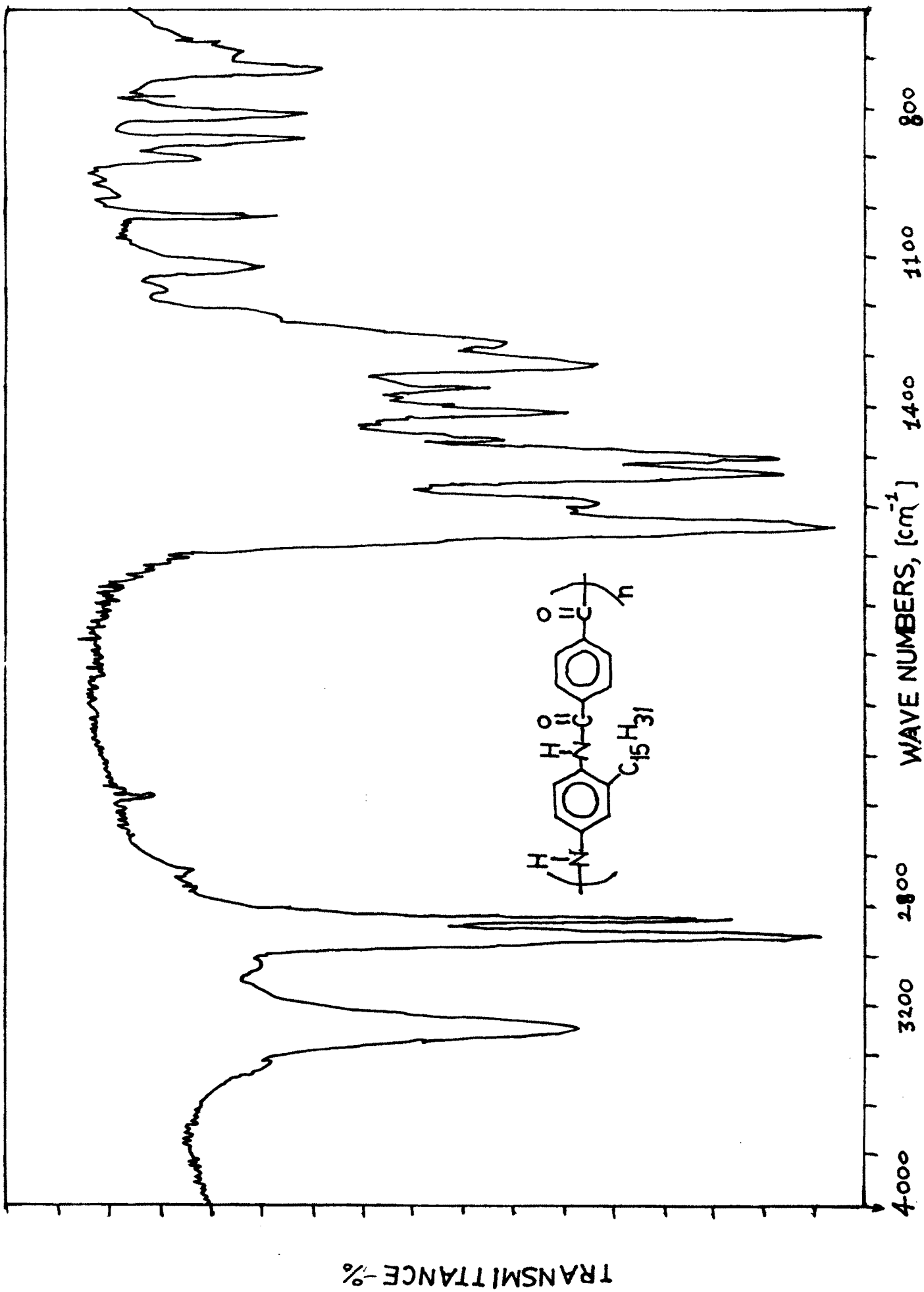


FIG. 14 IR SPECTRUM OF POLYAMIDE [E] FROM PBDA AND TPC

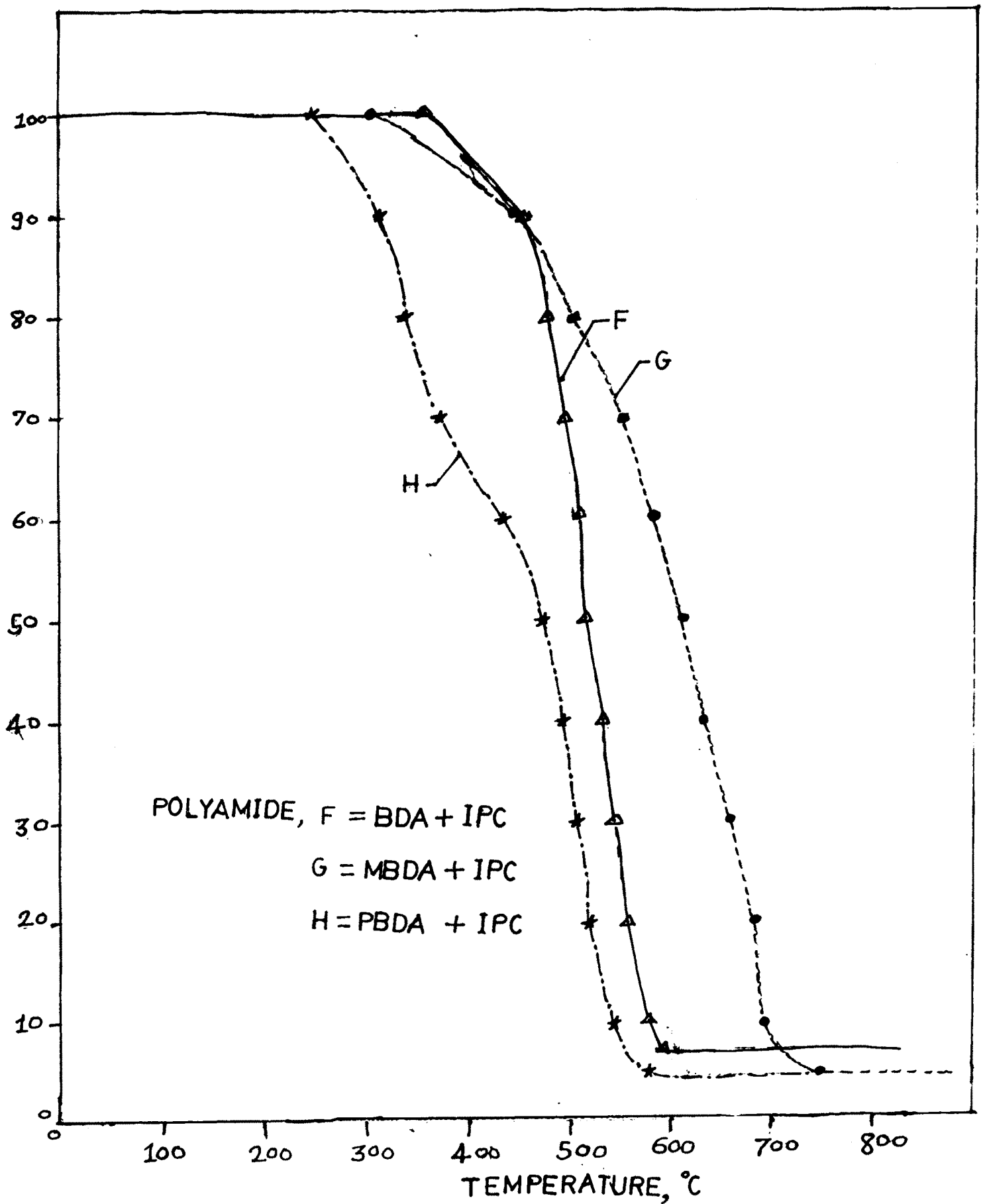


FIG.15 TGA CURVE IN AIR AT 10°C/MIN FOR POLYAMIDES F, G AND H

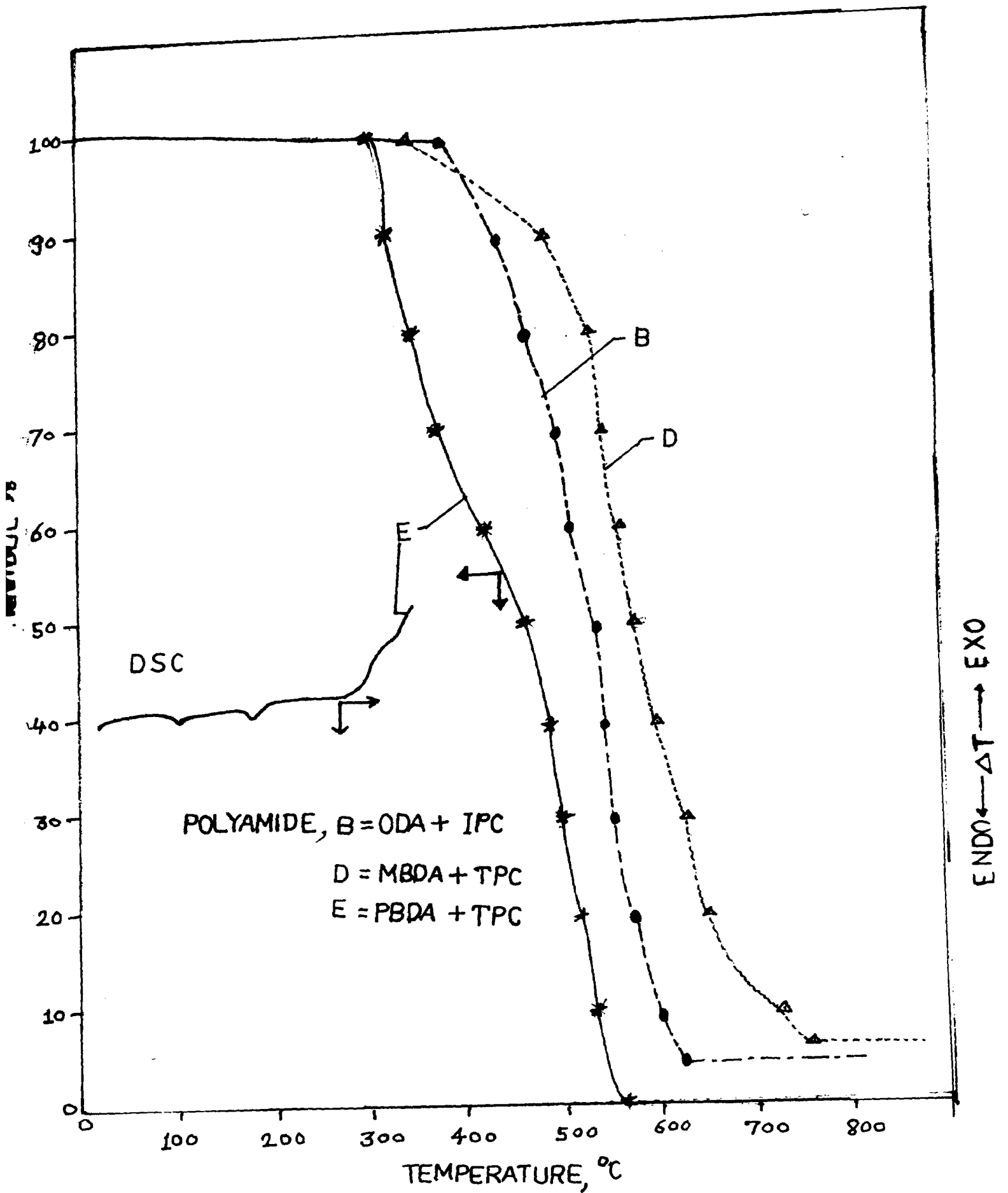


FIG. 16 TGA CURVE IN AIR AT 10°C/MIN FOR POLYAMIDES B, D AND E.