

High Pressure Copolymerization of Styrene with Maleic Anhydride

Fig. 4 shows the dependence of the $\log f_{\text{MSM}}$ on the reaction pressure. Evidently, the value of f_{MSM} increased on pressure. These facts suggest that a high pressure favored the formation of M-S-M type copolymer.

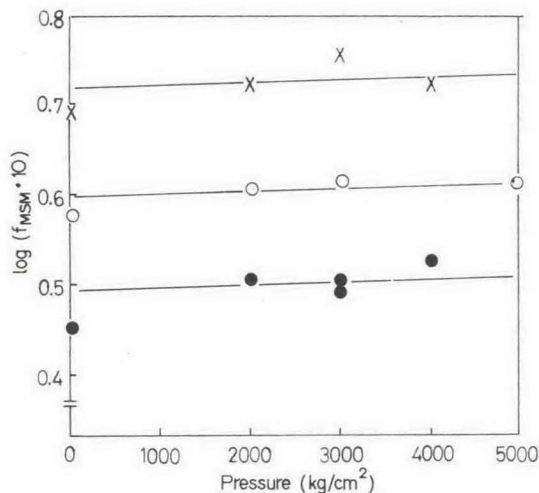


Fig. 4. Effect of pressure on f_{MSM}
—●— $x = 43.1$; —○—
 $x = 25.3$; —x— $x = 12.6$

It may be concluded from the results of these investigations that the copolymerization reaction with maleic anhydride and polymer chain which possess maleic anhydride unit preceding the active styrene chain end especially increase with pressure, namely penultimate effect disappears with pressure.

- 1) W. G. BARB, J. Polymer Sci. **11** (1953) 117.
- 2) A. E. NICHOLSON and R. G. W. NORRISH, Discuss. Faraday Soc. **22** (1956) 97, 104.
- 3) R. L. MILLER and L. E. NIELSEN, J. Polymer Sci. **46** (1960) 303.
- 4) T. L. ANG and H. J. HARWOOD, Amer. chem. Soc. — Polymer Preprints **5**, No. 1 (1964) 306.