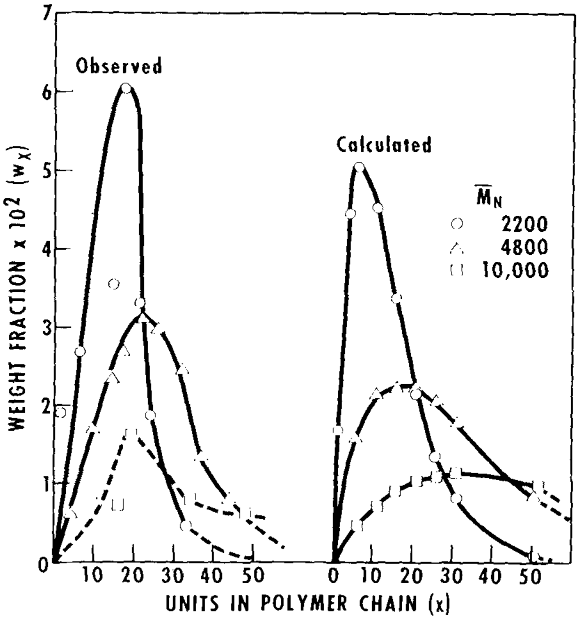

FIG. 4. Differential distributions for soybean vinyl ether homopolymers.

weight and intrinsic viscosity of benzene solutions of polymers having molecular weights below 10,000 (7).

Preparation of Monomer. Conjugated soybean vinyl ether was prepared by the method of Mustakas *et al.* (8). Two samples were used, having the following analyses:

Monomer Sample 1. Purity: 98.2%. Conjugation: diene, 35.4%; triene, 0.3%.
Monomer Sample 2. Purity: 99.5%. Conjugation: diene, 36.0%; triene, 0.3%.

Preparation of Polymers. Polymerizations with stannic chloride as catalyst were conducted in benzene solution and initiated at 25°C. as described by Dufek *et al.* (3). The ratio of solvent to monomer was varied to obtain polymers of the desired molecular weight. Polymerization with boron trifluoride as catalyst were conducted in methylene chloride solution and initiated at −37° as described by Schneider *et al.* (9). Other experimental details and properties of the polymers are given in Table I.

Fractionation of Polymers. The method of integral fractionation (10) was employed. In the following operations precautions were taken to minimize contact of the solutions and polymeric materials with air. Commercial C. P. solvents were used without further purification. Approximately 5 to 10 l. of a 1% solution of polymer in benzene were prepared. Portions (500 ml.) of this solution were transferred to a number of 1-liter Erlenmeyer flasks (stoppered with corks wrapped in aluminum foil; referred to hereafter as flasks 1, 2, 3, etc.). Flask 1 was titrated with methanol until permanent turbidity developed. The volume (V) of methanol was noted, and to each of the remaining flasks, Nos. 2, 3, 4, etc., increasing volumes, for example, V + 5 ml., V + 10 ml., V + 15 ml., etc., of methanol were added, respectively. The bottles were stoppered and allowed to stand (2 to 3 days) until the precipitated polymer had settled to the bottom, leaving a clear supernatant liquid.

The supernatant liquid in each flask was then carefully decanted, and the precipitated polymer was immediately dissolved in benzene. About 20 to 50 ml. of benzene were required for each flask to insure solution of all the polymer that might have adhered to the walls of the flask. The benzene solutions were then transferred quantitatively with the aid of additional benzene to tared 100-ml., round-bottom, one-necked flasks. The bulk of the benzene was removed from each solution by distillation *in vacuo* on a steam bath, and the final traces of solvent were removed *in vacuo* by means of a rotating evaporator. Residual polymer from each flask was weighed. Fractionation of each polymer is shown graphically in Figure 1. Molecular weights of selected fractions of each polymer were determined as described. Data obtained on fractions of the polymer of molecular weight 4,800 (Table II) are typical.

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Erratum

Eric Jungermann of Armour and Company, Chicago, Ill., writes: "In our article, 'Quantitative Gas Chromatography of Fatty Derivatives,' which appeared in the September 1960 issue (*37*, 456) a line was omitted from the text. The error occurs between the eighth and ninth lines from the bottom of the right-hand column of p. 457, where the following should be inserted: 'methyl esters have the relative magnitudes required. This line has the.' "