in all experiments, the hydrocarbon fraction boiling in the narrow range 895-925°is easily separated, the attempt was made to isolate individual hydrocarbons from the heptane fraction. For this purpose 20.3 ml of the fraction boiling at 75-100°, obtained from several experiments, was passed twice through a 40 g silica gel column to remove the olefins from it /4/. We recovered 19 ml of saturates, from which, after distillation through a column yielded the following three fractions: I 3 ml boiling at 80-91°, d_4^{20} 0.6888, n_D^{20} 1.3882; II 12 ml boiling at 91-92°, d_4^{20} 0.6879, n_D^{20} 1.3900; III 3.5 ml residue, d_4^{20} 0.6894, n_D^{20} 1.3904.

Fraction II, comprising 59% of the heptane fraction, corresponds in properties to 3-methylhexane. By the method of combinational light-scattering it was confirmed that this fraction contained, in effect, only the hydrocarbon 3-methylhexane which was identified by the frequencies: 329 (4 broad, doublet), 379 (1 broad), ... , etc. This provides confirmation that in the process under investigation, n-butane reacts with propylene according to the equation:

.....R.p. 1014 (misprinted 4014)

An analogous scheme was given for the thermal alkylation of propane by ethylene /3/, where the condensate contained 52% 2-methylbutane, as well as for the alkylation of n-butane with ethylene in the presence of homogeneous catalysts /2/.

By means of a special expt. conducted at 450° and 600 atm, we showed that on passage of n-butane alone through the catalyst, without propylene admixture, 11.2% of the n-butane