

Isomerization of terpene hydrocarbons by the action of silica gel under the conditions of adsorptional analysis

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Abstract

1. α -Pinene, δ^3 -carene, and dipentene are isomerized on silica gel under the conditions of adsorptional analysis: α -pinene is isomerized to camphene, dipentene, and terpinolene; Δ^3 -carene to dipentene and terpinolene; and dipentene to terpinolene, which then undergoes further transformation. In the first two cases the terpinolene is formed by the isomerization of dipentene. 2. The isomerization of α -pinene, Δ^3 -carene, and dipentene by silica gel under the conditions of adsorptional analysis is analogous to their isomerization by activated clays at temperatures close to the boiling points of the hydrocarbons. 3. The results obtained for the isomerization of α -pinene by silica gel under the conditions of adsorptional analysis do not accord with the assertion by Tishchenko and Rudakov concerning the indifference of "samples of highly active silica gel" with respect to pinene. © 1953 Consultants Bureau, Inc.

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