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ABSTRACT

A method of isomerization of hydrocarbons that does not require introduction of a chlorine compound in the process of isomerization of hydrocarbons and that
5 uses a catalyst of high activity, as well as an isomerization device for performing the same are provided. According to the isomerization method of the present invention, isomerized hydrocarbon is obtained by bringing a solid acid catalyst comprising a support,
10 which comprises portions made of zirconia and/or hydrated zirconia, and a sulfurous component supported on this support into contact with starting hydrocarbons having a water concentration of 5 ppm or less, preferably 1 ppm or less, in terms of the weight of
15 the water in the presence of hydrogen. It is preferred that the solid acid catalyst comprise one or more metal components selected from Group 8, Group 9, and Group 10 and/or that the support comprise portions made of zirconia and/or hydrated zirconia and portions made of
20 aluminum and/or hydrated alumina.

The isomerization device comprises a dehydration device for dehydrating the starting materials, a catalytic reactor charged with the above-mentioned solid acid catalyst, a separation device for separating
25 the product into hydrogen to be recycled and hydrocarbon product, and a compressor for compressing



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the recycled hydrogen and feeding it to the catalytic reactor.