CLAIMS

Claim 1

A method for preparing a polybutene, comprising:

performing a selective hydrogenation reaction of diolefin among C4 hydrocarbon components produced from petroleum refineries or naphtha cracking centers, which involve cracking crude oils, and simultaneously an isomerization reaction of 1-butene to 2-butene and then isolating an isobutene feedstock through fractional distillation; and

polymerizing the isobutene feedstock obtained by the fractional distillation,

and wherein the fractional distillation is performed in condition of 70 to 130 stages distillation tower, 20 to 80℃ operating temperature and 5 to 10 atmospheric pressure of operation pressure.

Claim 2

The method for preparing a polybutene as claimed in claim 1, wherein the polybutene is selected from the group consisting of a highly reactive polybutene having a vinylidene content of at least 70%, a middle reactive polybutene having a vinylidene content of 40 to 70%, and a conventional polybutene having a vinylidene content of 3 to 40%.

Claim 3

The method for preparing a polybutene as claimed in claim 2, wherein the conventional polybutene is prepared using aluminum trichloride as a catalyst, and the highly reactive polybutene and the middle reactive polybutene are prepared using boron trifluoride(BF3) as a catalyst and a cocatalyst.

Claim 4

The method for preparing a polybutene as claimed in claim 3, wherein the cocatalyst is a primary, secondary or tertiary alcohol having 1 to 4 carbon atoms or a primary, secondary or tertiary ether having 2 to 8 carbon atoms

Claim 5

The method for preparing a polybutene as claimed in claim 1, wherein as for the polymerization of the isobutene feedstock, the polymerization temperature is -30 to 20℃, the polymerization pressure is 3 kg/cm^2 or above and the retention time is 5 to 100 minutes.

Claim 6

The method for preparing a polybutene as claimed in claim 1, wherein the hydrogenation reaction of diolefin and the isomerization reaction of 1-butene are performed by supplying a hydrogen gas to the C4 hydrocarbon component in the presence of a metal catalyst.

Claim 7

A polybutene obtained by the preparation method as claimed in any one of claims 1 to 6.