CLAIMS

1 A method for preparing polybutene having 40 to 70% of vinylidene content and 10% or more of tetra-substituted double bond content, the method comprising:

introducing, to a raw reaction material including 10 wt % or more of isobutene, a complex catalyst, including normal propanol as a cocatalyst and boron trifluoride as a main catalyst in a molar ratio of normal propanol/boron trifluoride of 1 to 1.5; and

polymerizing the raw reaction material at a reaction temperature of -33 to 33° C. under a reaction pressure of 3 to 50 kg/cm^2, wherein the vinylidene content is adjusted by adjusting the reaction temperature;

wherein the vinylidene content is adjusted by adjusting the reaction temperature according to Formula 1:

$1.2x|T| \leq \Delta V \leq 3 \times |T|$ [Formula 1]

wherein,

T represents the reaction temperature; |T| represents variation of the reaction temperature based on a reaction temperature of 0° C.; and ΔV represents variation of the vinylidene content.

2 The method for preparing polybutene of claim 1, wherein the boron trifluoride is 0.02 to 1 parts by weight with respect to 100 parts by weight of isobutene.

3 The method for preparing polybutene of claim 1, wherein the polymerization is carried out for 5 to 100 minutes.

4 The method for preparing polybutene of claim 1, wherein for adjusting terminal vinylidene, the isobutene conversion rate is 80% or more.

5 The method for preparing polybutene of claim 1, wherein a number average molecular weight of polybutene is 300 to 5,000.