[CLAIMS]

What is claimed is:

[Claim 1]

A method for producing isobutylene, in which a raw material gas containing isobutanol is brought into contact with a catalyst to produce isobutylene from isobutanol, the method comprising:

bringing the raw material gas containing isobutanol into contact with the catalyst at a linear velocity of 1.20 cm/s or more under a pressure of 120 kPa or more in terms of absolute pressure to produce isobutylene from isobutanol.

[Claim 2]

The method for producing isobutylene according to Claim 1,

wherein a concentration of the isobutanol contained in the raw material gas containing isobutanol is 15% by volume or more and 100% by volume or less.

[Claim 3]

The method for producing isobutylene according to Claim 1 or 2,

wherein the catalyst has a particle diameter of 700 μm or more and 10,000 μm or less.

[Claim 4]

The method for producing isobutylene according to any one of Claims 1 to 3,

wherein the catalyst is a catalyst containing alumina.

[Claim 5]

A method for producing methacrylic acid, comprising:

producing methacrylic acid from the isobutylene produced according to the method for producing isobutylene according to any one of Claims 1 to 4.

[Claim 6]

A method for producing methacrylic acid, comprising:

obtaining tert-butyl alcohol from the isobutylene produced according to the method for producing isobutylene according to any one of Claims 1 to 4, and subsequently producing methacrylic acid from the obtained tert-butyl alcohol.

[Claim 7]

A method for producing methyl methacrylate, comprising:

producing methyl methacrylate from the methacrylic acid produced according to the method for producing methacrylic acid according to Claim 5 or 6 and from methanol.