

ABSTRACT

An object of the present invention is to provide a catalyst that enables production of an unsaturated carboxylic acid and/or unsaturated carboxylic acid ester represented by methyl methacrylate with high selectivity. The object is achieved by a catalyst including: one or more elements selected from boron, magnesium, zirconium, hafnium, and titanium; one or more elements selected from alkali metal elements; and silica; the catalyst having a peak height ratio I_2/I_1 of 0 to 1.2, wherein I_1 represents the peak height at $417\pm10\text{ cm}^{-1}$, and I_2 represents the peak height at $1050\pm10\text{ cm}^{-1}$, as obtained by Raman spectroscopy.

Figure 1 accompanies.