

ABSTRACT

A PROCESS FOR PRODUCING UNSATURATED ALDEHYDE AND
CARBOXYLIC ACID

A process for producing an unsaturated aldehyde and an unsaturated carboxylic acid is provided wherein isobutylene or tertiary butanol is subjected to vapor phase catalytic
5 oxidation with molecular oxygen using a fixed bed multi-tubular reactor comprising a plurality of tubes which are packed with a bismuth molybdate based composite oxide containing antimony at a raw material gas inlet side of each reaction tube and with bismuth molybdate based antimony-free composite oxide catalyst
10 at a gas outlet side. By conducting the process, the unsaturated aldehyde and the unsaturated carboxylic acid can be produced with high yield, while suppressing generation of hot spots in the reactors and prolonging lifetime of the catalyst.