

OPTICALLY ACTIVE EPOXIDES AND
A PROCESS FOR THE PRODUCTION THEREOF

Abstract

The present invention is optically active epoxides and its production characterized in that the process comprises reacting alkenyl ethylene glycols with 0.5 to 2.0 equivalents of a titanium-tetraalkoxyde, a peroxide and an L-(+)- or D-(-)-dialkyl tartrate at a temperature of -78° to 50°C to asymmetrically oxidize the alkenyl ethylene glycols. The production of the present invention is an excellent method for producing chiral epoxides in which steric configuration of three asymmetric points can be perfectly controlled, the reaction is performed by mild conditions and the chemical yield and the optical yield are extremely high. The optically active epoxides which can be efficiently produced by the production of the present invention are useful as starting materials of several kinds of compounds.

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