Title (en)

Process for the preparation of oxiranes substituted by halogen alkyl.

Title (de)

Verfahren zur Herstellung von halogenalkylsubstituierten Oxiranen.

Title (fr)

Procédé de préparation d'oxirannes substitués par des groupes halogénoalcoyle.

Publication

EP 0000555 A1 19790207 (DE)

Application

EP 78100457 A 19780720

Priority

DE 2734086 A 19770728

Abstract (en)

1. Process for the preparation of halogenalkyl-substituted oxiranes from chloroalkyl-substituted or bromoalkyl-substituted monoolefins of the general formula see diagramm : EP0000555,P9,F1 wherein R1 and R4 independently of one another denote hydrogen, C1 - to C5 -alkyl, C5 - to C7 -cycloalkyl, monochloro-C1 - to C5 -alkyl, monobromo-C1 - to C5 -alkyl, dichloro-C1 - to C5 -alkyl, dibromo-C1 - to C5 -alkyl, monochloro-C5 - to C7 -cycloalkyl, monobromo-C5 - to C7 -cycloalkyl, dichloro-C5 - to C7 -cycloalkyl or dibromo-C5 - to C7 -cycloalkyl and R2 and R3 independently of one another represent hydrogen, C1 - to C5 -alkyl, monochloro-C1 - to C5 -alkyl, monobromo-C1 - to C5 -alkyl, dichloro-C1 - to C5 -alkyl and dibromo-C1 - to C5 -alkyl, it being possible for the radicals R2 and R3 , together with the carbon atoms of the C=C double bond, to form a ring with up to 12 carbon atoms, and at least one of the radicals R1 to R4 being an alkyl or cycloalkyl radical of the type mentioned containing chlorine or bromine, and percarboxylic acids at an elevated temperature and in the presence of solvents, characterised in that the reaction is carried out with a solution of a percarboxylic acid containing 3 to 4 carbon atoms in benzene, at a molar ratio of monoolefin to percarboxylic acid of 1.1 : 1 to 10 : 1 and at a temperature of 60 degrees C to 80 degrees C, the percarboxylic acid containing up to 5% by weight of water and up to 2% by weight of hydrogen peroxide and the percarboxylic acid solution used for the reaction having a mineral acid content of below 50 ppm.

Abstract (de)

Die vorliegende Erfindung betrifft ein verbessertes Verfahren zur Herstellung von halogenalkylsubstituierten Oxiranen aus halogenalkylsubstituierten Olefinen und Percarbonsäuren in organischer Lösung in hohen Ausbeuten und großer Reinheit welches dadurch gekennzeichnet ist, daß man ein chloralkyloder bromalkylsubstituiertes Monoolefin der allgemeinen Formel <IMAGE> mit einer Lösung einer 3 bis 4 Kohlenstoffatome enthaltenden Percarbonsäure in einem aromatischen, 6 bis 12 Kohlenstoffatome atome enthaltenden Kohlenwasserstoff bei einem Molverhältnis von Monoolefin zu Percarbonsäure von 1,1 : 1 bis 10 : 1 und bei einer Temperatur von 30 bis 100°C umsetzt.

IPC 1-7

C07D 303/08; C07D 301/14

IPC 8 full level

C07D 303/08 (2006.01); C07D 301/14 (2006.01)

CPC (source: EP)

C07D 301/14 (2013.01); **C07D 303/08** (2013.01)

Citation (search report)

- FR 2309551 A1 19761126 - BAYER AG [DE]
- FR 2300085 A1 19760903 - INTEROX CHEMICALS LTD [GB]

Cited by

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Designated contracting state (EPC)

BE CH DE FR GB NL

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DOCDB simple family (application)

EP 78100457 A 19780720; AT 544678 A 19780726; CA 308194 A 19780726; DD 20695678 A 19780726; DE 2734086 A 19770728; DE 2861620 T 19780720; JP 9056878 A 19780726