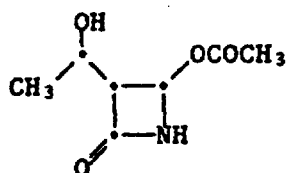


A process for the manufacture of 4-acetoxy-3-hydroxyethyl-azetidinone

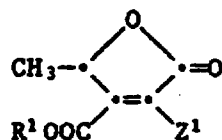
Abstract

The invention relates to a novel process for the manufacture of 4-acetoxy-3-hydroxyethyl-azetidinone of the formula



(I),

especially 4(R)-acetoxy-3(R)-(1'(R)-hydroxyethyl)-2-azetidinone, from enantiomerically pure compounds of the formula



(II)

in which R^1 represents lower alkyl and Z^1 represents amino, arylmethylamino, acylamino or azido, by reduction of the C=C double bond and optionally of the arylmethylamino or azido group with hydrogen, opening of the lactone ring, cyclisation to the β -lactam, optionally after hydrolysis of the acylamino group, and oxidative

decarboxylation of the original lactone carboxy group in the presence of an acetate-yielding agent. Compounds of the formula I can be used as starting materials for the manufacture of β -lactam antibiotics. The invention also relates to novel intermediates and starting materials.