

Title (en)  
METHOD FOR THE PRODUCTION OF ALDEHYDES AND KETONES BY OXIDISING PRIMARY AND SECONDARY ALCOHOLS WITH  
ALKYLPHOSPHONIC ACID ANHYDRIDES

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON ALDEHYDEN UND KETONEN DURCH OXIDATIONEN VON PRIMÄREN UND SEKUNDÄREN  
ALKOHOLEN MIT ALKYLPHOSPHONSÄUREANHYDRIDEN

Title (fr)  
PROCEDE DE FABRICATION D'ALDEHYDES ET DE CETONES PAR OXYDATION D'ALCOOLS PRIMAIRES ET SECONDAIRES A L'AIDE  
D'ANHYDRIDES D'ACIDE ALKYLPHOPSPHONIQUE

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Application  
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Abstract (en)  
[origin: WO2005102978A1] The invention relates to a method for the production of a.) aldehydes of formula (II): R<1>\_> CHO and b.) aldehydes of formula (III): R<1>\_> C(O) <\_> R<2> by reacting a.) primary alcohols (R<1>CH<sub>2</sub>-OH) or b.) secondary alcohols (R<1>-CH(OH)-R<2>) with cyclic phosphonic acid anhydrides in the presence of dialkyl-, diaryl- and/or alkyl-aryl sulphonic oxides at a temperature in the region of between -100 to + 120 DEG C, whereby R<1> and/or R<2> represent H, a substituted linear or branched C1-C12-alkyl radical, a substituted C3-C10 cycloalkyl-, alkenyl-, aryl- or heteroaryl radical. A cyclic phosphonic acid anhydride is used, preferably, as a 2,4,6-substituted 1,3,5,2,4,6-trioxatriphosphinane of formula (I), wherein R' independently represents allyl, aryl or open-chained or branched C1 - C12-alkyl-radicals. Optionally, the reaction can be carried out in the presence of a tertiary amine base NR<5>3.

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