

ABSTRACT OF THE DISCLOSURE

A process for biologically producing an α -hydroxyamide or an α -hydroxy acid represented by formula (III):



wherein R represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryl group, a substituted or unsubstituted aryloxy group or a substituted or unsubstituted and saturated or unsaturated heterocyclic group; and X represents an amido group or a carboxyl group, comprising reacting an α -hydroxynitrile represented by formula (I):



wherein R is as defined above,
or a mixture of an aldehyde represented by formula (II):



R - CHO

(II)

wherein R is as defined above,
and hydrogen cyanide with a microorganism capable of
producing such an amide or acid from the corresponding α -
hydroxynitrile is disclosed, in which the reaction system
contains a sulfite ion, a disulfite ion or a dithionite
ion. The enzymatic activity of the microorganism lasts for
an extended period of time.

