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(54) Title: PROCESS FOR ACTINOL PRODUCTION FROM KETOISOPHORONE

(57) Abstract: Disclosed is a process for producing actinol from ketoisophorone which comprises contacting ketoisophorone with a recombinant microorganism or cell-free extract thereof in a reaction mixture, wherein said recombinant microorganism is obtainable by transforming a host microorganism, e.g. selected from the group consisting of microorganisms of the genera Saccharomyces, Zygosaccharomyces, and Candida, such as commercially available baker's yeast, Saccharomyces cerevisiae ATCC7754, Saccharomyces rouxii (Zygosaccharomyces rouxii) HUT7191 (IFO 0494), Saccharomyces delbrueckii HUT7116 (Saccharomyces unisporus IFO 0298), Saccharomyces delbrueckii (Torulaspora delbrueckii) HUT7102, Saccharomyces willianus HUT7106, Zygosaccharomyces bailii ATCC11486, Candida tropicalis IFO 1403, and a mutant thereof, which is capable of reducing ketoisophorone to levodione with a levodione reductase gene, e.g. a levodione reductase gene derived from a microorganism belonging to the genus Corynebacterium, such as C. aquaticum AKU611 (FERM BP-6448) or a mutant thereof, and isolating the produced actinol from the reaction mixture.

# INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 C12P7/26 //(C12P7/26,C12R1:865),(C12P7/26,C12R1:74), (C12P7/26,C12R1:645),(C12P7/26,C12R1:15)		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) IPC 7 C12P C12R		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS, EMBASE, FSTA, CHEM ABS Data		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WADA M ET AL: "Purification and characterization of monovalent cation-activated levodione reductase from <i>Corynebacterium aquaticum</i> M-13." APPLIED AND ENVIRONMENTAL MICROBIOLOGY, vol. 65, no. 10, October 1999 (1999-10), pages 4399-4403, XP002272891 ISSN: 0099-2240 abstract page 4401, left-hand column, line 28 -right-hand column, line 5 table 3	7,8
Y	EP 1 122 315 A (HOFFMANN LA ROCHE) 8 August 2001 (2001-08-08) cited in the application the whole document example 5	1,2,9
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents:		
*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family	
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  van de Kamp, M	

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A	<p>STOTT K ET AL: "Old Yellow Enzyme: The discovery of multiple isozymes and a family of related proteins" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 268, no. 9, 25 March 1993 (1993-03-25), pages 6097-6106, XP002252405 ISSN: 0021-9258 abstract</p> <p style="text-align: center;">---</p>	
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