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International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A61K 9/48, 9/20, 9/14 — A1

(11) International Publication Number: WO 97/16175

(43) International Publication Date: 9 May 1997 (09.05.97)

(21) International Application Number: PCT/US96/17563

(22) International Filing Date: 30 October 1996 (30.10.96)

(30) Priority Data:
08/551,166 31 October 1995 (31.10.95) US
08/551,153 31 October 1995 (31.10.95) US

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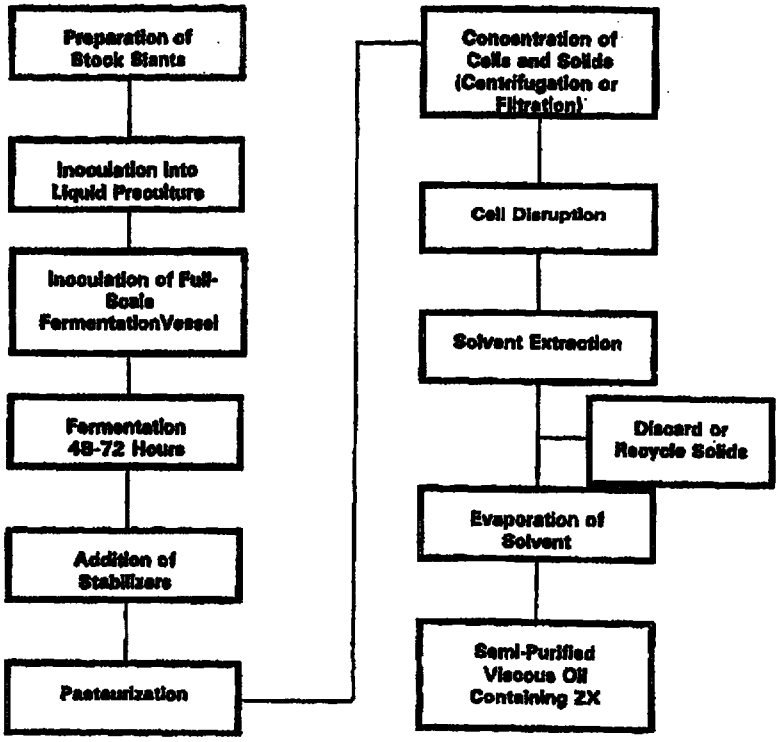
(81) Designated States: BR, CN, CZ, FI, HU, JP, KR, MX, NO, PL, RU, SG, UA.

Published
With international search report.

(54) Title: PURE 3R-3'R STEREOISOMER OF ZEAXANTHIN FOR TREATING MACULAR DEGENERATION IN HUMANS

(57) Abstract

Methods and formulations are disclosed for making and purifying the 3R-3R' stereoisomer of zeaxanthin as a sole detectable isomer for use as a drug or vitamin by humans, specifically for the treatment of patients suffering from macular degeneration. Zeaxanthin preparations containing only the desired 3R-3R' stereoisomer can be produced by a strain of Flavobacterium multivorum (ATCC accession number 55238). After synthesis using microbial fermentation, the zeaxanthin can be concentrated to a level of 5 to 20 percent (by weight) using simple and inexpensive means such as solvent extraction. It can also be purified to much higher levels by other methods if desired.



* (Referred to in PCT Gazette No. 32/1997, Section II)