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(54) Title: PRODUCTS COMPRISING CORN OIL AND CORN MEAL OBTAINED FROM HIGH OIL CORN

(57) Abstract: Corn oil and corn meal obtained from high oil corn are included in useful products. The corn oil is extracted from the high oil corn to form the corn meal. The corn oil generally comprises levels of nutrients not found in commercially available corn oils, since most or all of the corn grain, rather than just the germ, is exposed to the extraction process. The corn grain generally includes the steps of flaking corn grain having a total oil content of at least about 6 wt.% and extracting a corn oil from the flaked corn grain. The corn oil is useful for making nutritionally enhanced edible oil or cooking oil, lubricants, biodiesel, fuel, cosmetics and oil-based or oil-containing chemical products. The extracted corn meal is useful for making enhanced animal feed rations, snack food, blended food products, cosmetics, and fermentation broth additive.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A23J1/14 C11B1/04 C11B1/10 C12P7/06 C10L1/18  
 B03B1/00 B07B4/00 A23K1/16 A23K1/18 A23D9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23K C11B C12P C10L A23D C08L B02B A23J

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)

WPI Data, EPO-Internal, PAJ, FSTA, CHEM ABS Data, CAB Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 706 603 A (THOMPSON DONALD L ET AL) 13 January 1998 (1998-01-13) column 15, line 61 - line 64 column 18, line 7 - line 10 ---	1-3, 10, 41-43
X	J.M. AGUILERA ET AL.: "Laboratory and pilot solvent extraction of extruded high-oil corn" JOURNAL OF THE AMERICAN OIL CHEMISTS' SOCIETY., vol. 63, no. 2, 1986, pages 239-243, XP002199800 AMERICAN OIL CHEMISTS' SOCIETY. CHAMPAIGN., US ISSN: 0003-021X the whole document	41-48
A	---	1-23
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 95 22598 A (LETO KENNETH JOSEPH ;DU PONT (US); ULRICH JAMES FRANCIS (US))  24 August 1995 (1995-08-24)  page 1, line 4 - line 11  examples 2,4,5  claims 1,21</p>	41
A	<p>WO 98 43473 A (OPTIMUM QUALITY GRAINS L L C) 8 October 1998 (1998-10-08)  page 1, line 16 -page 2, line 10  page 32, line 22 -page 39, line 22  page 42, line 11 -page 43, line 1</p>	1,24,37, 41
A	<p>DATABASE WPI  Section Ch, Week 199621  Derwent Publications Ltd., London, GB;  Class D13, AN 1996-207298  XP002199802  DUPONT QUALITY GRAINS: "Modified dry milling of corn grain for prodn. of livestock meal, etc. - comprises opt. tempering corn grain by exposure to water or steam, de-germinating by mechanical fracturing and sepg."  abstract  &amp; RESEARCH DISCLOSURE,  vol. 384, no. 035,  10 April 1996 (1996-04-10),  Emsworth, GB</p>	1,10,37, 40
A	<p>J.W. PAULIS ET AL.: "Selection of high-lysine corns with varied kernel characteristics and compositions by a rapid turbidimetric assay for zein"  JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY.,  vol. 22, no. 2, 1974, pages 318-323,  XP002199801  AMERICAN CHEMICAL SOCIETY. WASHINGTON., US  ISSN: 0021-8561  page 320, column 2; table II</p>	41
A	<p>US 5 320 669 A (LIM SEUNG-TAIK ET AL)  14 June 1994 (1994-06-14)  cited in the application  the whole document</p>	33-36

## INTERNATIONAL SEARCH REPORT

Information on patent family members

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