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(54) Title: BARLEY WITH REDUCED LIPOXYGENASE ACTIVITY AND BEVERAGE PREPARED THEREFROM

(57) Abstract: According to the invention, there is provided barley with total loss of functional lipoxygenase (LOX)-1 and LOX-2 enzymes, and plant products produced thereof, such as malt manufactured by using barley kernels defective in the synthesis of the fatty acid-dioxygenating enzymes LOX-1 and LOX-2. Said enzymes account for the principal activities related to dioxygenation of linoleic acid into 9- and 13-hydroperoxy octadecadienoic acid, respectively. 9-Hydroperoxy octadecadienoic acid represents a LOX pathway metabolite, which - through further enzymatic or spontaneous reactions - may lead to the appearance of trans-2-nonenal (T2N). The invention enables brewers to produce a beer having insignificant levels of stale, T2N-specific off-flavors, even after prolonged storage of the beverage.



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A. CLASSIFICATION OF SUBJECT MATTER

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ADD.

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)

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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, BIOSIS, FSTA, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/204437 A1 (BREDDAM KLAUS [DK] ET AL BREDDAM KLAUS [DK] ET AL) 15 September 2005 (2005-09-15) paragraph [0190]; claims -----	1-14, 25-43
X	WO 2004/011591 A1 (NOVOZYMES AS [DK]; BISGAARD-FRANTZEN HENRIK [DK]; HANNEMANN WOLFGANG []) 5 February 2004 (2004-02-05) page 4, line 6 - line 12 page 5, line 21 - line 26 page 10, line 5 - line 8; claim 17; examples 3-4; tables 4, 7 ----- -/--	1-14, 25-43



Further documents are listed in the continuation of Box C.



See patent family 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.
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Information on patent family members

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