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[Continued on next page]

(54) Title: PROCESS FOR PRODUCING HIGH QUALITY NON-HEVEA NATURAL RUBBER

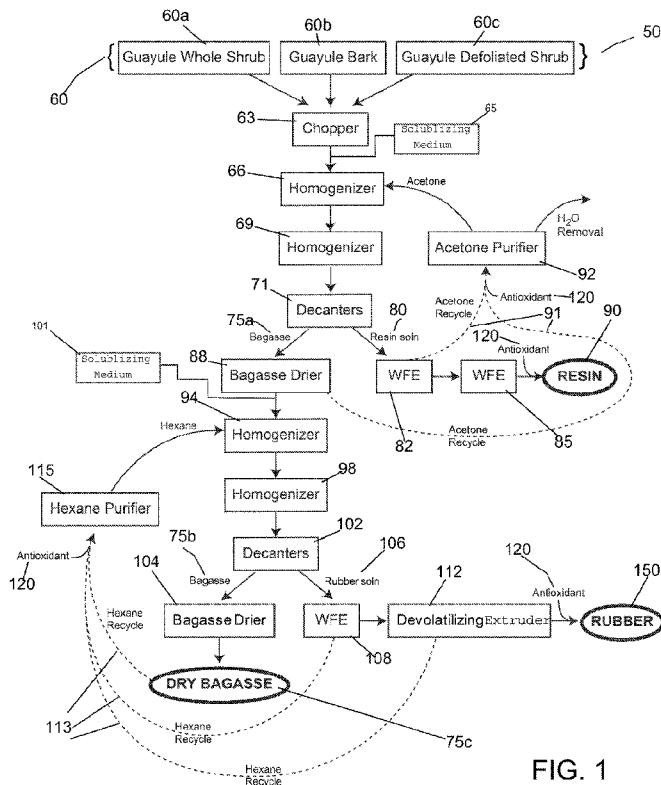


FIG. 1

(57) Abstract: Some embodiments of the invention include a process for separating rubber, resin and bagasse from at least a portion of a rubber producing plant including the steps of providing a plant portion and at least partially homogenizing the plant portion in the presence of a resin-solubilizing medium, and extracting rubber using a rubber solubilizing solvent. In some embodiments, the plant portion can include an antioxidant, that in some embodiments, the includes a substantially non-staining antioxidant. Some other embodiments include a process for separating rubber, resin and bagasse from a rubber producing plant comprising the steps of providing a plant portion and applying at least one antioxidant to at least a fraction of the plant portion, milling the plant portion with a milling solvent, and separating rubber from resin using phase separation fractionation. Some embodiments include separation of bagasse and resin components and one or more solvent recovery steps.

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## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2014/029848****A. CLASSIFICATION OF SUBJECT MATTER****C08C 1/02(2006.01)i, C08C 1/04(2006.01)i, C08L 7/00(2006.01)i**

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)

C08C 1/02; A01D 45/16; A23K 1/14; C08G 83/00; C08C 4/00; A23K 1/12; C08C 1/04; C08L 7/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) &amp; keywords: rubber, resin, guayule, seperate, recover, extract, antioxidant, surfactant, latex

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4526959 A (KAY, E. L. et al.) 2 July 1985 See column 6, line 43 - column 7, line 47, column 7, line 57 - column 8, line 24, column 9, lines 14-15, column 21, lines 41-42; claims 1, 10; and tables 1-2.	1-14, 17-32
Y		15-16, 33-36
Y	US 4107902 A (SUGGS, C. W.) 22 August 1978 See column 3, line 60 - column 5, line 3; and figures 2-4.	15
Y	WO 80-01351 A1 (C. BREWER AND COMPANY, LIMITED) 10 July 1980 See abstract; and claims 1-3, 8, 21.	16, 36
Y	US 3272767 A (HOWLAND, L. H. et al.) 13 September 1966 See column 2, lines 38-46, column 3, lines 36-37; and claim 1.	33-36
A	US 5580942 A (CORNISH, K.) 3 December 1996 See abstract; and claims 1-3.	1-36

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

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"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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2014/029848**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4526959 A	02/07/1985	EP 0039910 A1 EP 0039910 B1 EP 0164137 A2 EP 0164137 B1 JP 02016321 B JP 1594069 C JP 57-058831 A US 4435337 A US 4542191 A	18/11/1981 29/12/1999 11/12/1985 27/06/1990 16/04/1990 14/12/1990 08/04/1982 06/03/1984 17/09/1985
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US 3272767 A	13/09/1966	None	
US 5580942 A	03/12/1996	US 5717050 A	10/02/1998