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ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR ELIMINATING/REDUCING COMPOUNDS WITH A MUSTY TASTE/ODOUR IN MATERIALS
THAT ARE TO COME INTO CONTACT WITH FOODSTUFFS AND IN FOODS OR DRINKS

(57) Abstract: The present invention relates to a method for eliminating/reducing compounds that have a musty taste/odour in materials that are to come into contact with foodstuffs and in foods or drinks, based on the reduction/elimination of TCA (2, 4, 6-trichloranisole) in materials that are to come into contact with foodstuffs and in foods or drinks, in particular cork stoppers. The present invention also relates to the products treated with this method. The method of the invention is based on the irradiation with gamma rays of the abovementioned products with an intensity and duration (radiation dose) that causes the molecular degradation of the TCA molecule, thus eliminating or reducing this compound to a level below the detection limit for consumers.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/PT2004/000021

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B27K7/00 B67B1/03 A23L3/26 B65B55/08 C12H1/16

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 B27K B67B A23L B65B C12H

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ZEHNEDR H. J., BUSER, H. R., TANNER H.: DEUTSCHE-LEBENSMITTEL RUNDSCHAU, vol. 80, no. 7, 1984, - 1984 pages 204-207, XP009037888 the whole document -----	1-9
X	FR 2 798 879 A (COMMISSARIAT ENERGIE ATOMIQUE) 30 March 2001 (2001-03-30) page 4, lines 26-28; claim 1 -----	1-9
X	WO 00/64649 A (VINPAC INTERNAT PTY LTD ; MA ROSALIND (AU); WILKS TERRY (AU); BRITCHER) 2 November 2000 (2000-11-02) claims 1,2,5 -----	8
A		1-7
X	DE 100 22 535 A (AUGUST RISTELHUEBER GMBH & CO) 29 November 2001 (2001-11-29) paragraph '0010!; claim 1 -----	8
A		1-7
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

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E earlier document but published on or after the international filing date

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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

Date of the actual completion of the international search

4 February 2005

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/PT2004/000021

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	LATIF, N. ET ALL: "Two routes in the formation of hydrogen halides from HO adducts of halogenated anisoles in aqueous solutions" BER. BUNSENGES. PHYS. CHEM., vol. 82, 1978, pages 468-471, XP009043241 the whole document -----	1-7
A	MAZZOLENI, V., MOLTENI, R., FUMI, M.D., MUSCI, M.: "Effetto dell'irradiazione con elettroni accelerati sul sughero utilizzato per la produzione di tappi" INDUSTRIE DELLE BEVANDE, vol. 29, no. June, 2000, pages 247-257, XP009038101 the whole document -----	1-7
A	QUINT R M ET AL: "gamma-radiolysis and pulse radiolysis of aqueous 4-chloroanisole" RADIATION PHYSICS AND CHEMISTRY, ELSEVIER SCIENCE PUBLISHERS BV., AMSTERDAM, NL, vol. 47, no. 6, 1 June 1996 (1996-06-01), pages 835-845, XP004050986 ISSN: 0969-806X the whole document -----	1-7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/PT2004/000021

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-9 (partially)

process for eliminating/reducing compounds with a musty taste/odour in materials that are to come into contact with foodstuffs, characterised in that it relates to the reduction/elimination of 2,4,6-trichloroanisole (TCA) in said materials, based on irradiation with gamma rays at a radiation dose in the range of 15 to 400 kGy, in order to reduce the concentration of this compound to levels below the detection limits for consumers, whereby said materials are cork stoppers or other cork products.

2. claims: 1, 7-9 (all partially)

process for eliminating/reducing compounds with a musty taste/odour in materials that are to come into contact with foodstuffs, characterised in that it relates to the reduction/elimination of 2,4,6-trichloroanisole (TCA) in said materials, based on irradiation with gamma rays at a radiation dose in the range of 15 to 400 kGy, in order to reduce the concentration of this compound to levels below the detection limits for consumers, whereby said materials are packagings

3. claims: 1, 4-9 (all partially)

process for eliminating/reducing compounds with a musty taste/odour in foods, characterised in that it relates to the reduction/elimination of 2,4,6-trichloroanisole (TCA) in said foods, based on irradiation with gamma rays at a radiation dose in the range of 15 to 400 kGy, in order to reduce the concentration of this compound to levels below the detection limits for consumers

4. claims: 1, 4-9 (all partially)

process for eliminating/reducing compounds with a musty taste/odour in drinks, characterised in that it relates to the reduction/elimination of 2,4,6-trichloroanisole (TCA) in said drinks, based on irradiation with gamma rays at a radiation dose in the range of 15 to 400 kGy, in order to reduce the concentration of this compound to levels below the detection limits for consumers

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
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