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Datasheet for the decision of 13 November 2006

Case Number: W 0010/05 - 3.3.05

Application Number: PCT/PT2004/000021

Publication Number:

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Language of the proceedings: EN

Title of invention:
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

Applicant:
CHIP - CENTRO DE HIGIENIZAÇÃO POR IONIZAÇÃO DE PRODUTOS S.A.

Opponent:
-

Headword:
Irradiation/CHIP

Relevant legal provisions:
PCT Art. 17(3)(a)
PCT R. 13, 40

Keyword:
"Lack of unity a posteriori - objection unfounded"
"Reimbursement of search and protest fees - yes"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: W 0010/05 - 3.3.05

International Application No. PCT/PT2004/000021

D E C I S I O N
of the Technical Board of Appeal
of 13 November 2006

Applicant: CHIP - CENTRO DE HIGIENIZAÇÃO POR IONIZAÇÃO DE PRODUTOS S.A.

Representative: Pereira da Cruz, Jorge Afonso
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Decision under appeal: **Protest according to Rule 40.2(c) of the Patent Cooperation Treaty made by the applicants against the invitation (payment of additional fees) of the European Patent Office (International Searching Authority) dated 22 October 2004 .**

Composition of the Board:

Chairwoman: M. Eberhard
Members: B. Czech
T. Bokor

Summary of Facts and Submissions

I. International patent application PCT/PT2004/000021 was filed with ten claims.

Independent claim 1 reads as follows:
"*1. 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, characterised in that it relates to the reduction/elimination of 2,4,6-trichloroanisole (TCA) materials that are to come into contact with foodstuffs and in foods or drinks, based on irradiation with gamma rays at a radiation dose in the range of 15 to 400 kGy, preferably between 90 and 110 kGy and most preferably 100 kGy, reducing the concentration of this compound to levels below the detection limits for consumers.*"

Independent claim 8 is identical with independent claim 9 and reads as follows:
"*8. Products that are to come into contact with foodstuffs, especially cork or cork stoppers or packaging, and also foods or drinks, treated according to claim 1.*"

One dependent claim, arranged between claims 7 and 8, bears no numbering.

II. The European Patent Office (EPO), acting as an International Searching Authority (ISA), informed the applicant that the international application did not comply with the requirement of unity of invention set out in Rule 13 PCT. It considered that there are four inventions claimed and invited the applicant to pay

three additional fees in accordance with Article 17(3)(a) and Rule 40.1 PCT.

The invitation to pay additional fees was dispatched on 22 October 2004 together with a partial search report (see Form PCT/ISA/206 (Annex, first sheet) citing two documents of category "X" for claims 1 to 9, namely

Zehnder H.J. et al., Deutsche Lebensmittel-Rundschau, 1984, Vol. 80, No. 7, pages 204 to 207; and

FR-A-2 798 879.

In the invitation (see Form PCT/ISA/206 (extra sheet), page 1) the ISA identified the four (groups of) inventions as follows (emphasis added by the board):

"*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-trichioroanisole [sic!] (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-trichioroanisole [sic!] (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-trichioroanisole [sic!] (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-trichioroanisole [sic!] (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."

Considering present claims 1 and 8, the ISA identified four different problems i) to iv) to be solved by the application, see the paragraph bridging pages 1 and 2 of Form PCT/ISA/206 (extra sheet). The ISA formulated these four problems using essentially the same wording already relied upon in reciting the four (groups of) inventions found (see above), i.e. differentiating between the treatment of cork stoppers or other cork products, packagings, foods and drinks, respectively. It considered that the "*aforementioned technical problems together with the corresponding solutions have to be regarded as four different inventions*".

Concerning the alleged lack of unity, the ISA stated the following:

"*2. Since different technical problems underlie to these inventions, and there is no relationship involving a common special technical feature between them or between the corresponding solutions in view of Dl and D2 (see Re Item V, points 2.a-b), a single inventive concept is missing (R. 13.2-3 PCT). The present application lacks therefore unity (R. 13.1 PCT).*"

III. The applicant paid the three additional search fees and filed a reasoned statement contesting the analysis made by the ISA having respect to the lack of unity. The applicant argued that the subject-matter of the application was to eliminate/reduce the quantity of one compound, 2,4,6-trichloranisole ("TCA"), irrespective

of the material in which it was found. The process did not vary depending on whether the TCA was found in cork or in a beverage or solid foodstuff, either packed or unpacked. The two references cited were not relevant since they were totally unrelated to the subject-matter of the present patent application. More particularly, the first reference ("Zehnder et al.") concerned the sterilisation of corks using gamma radiations "lower" than those according to the present application. This prevented the formation of TCA by eliminating the micro-organisms responsible for converting 2,4,6-trichlorophenol ("TCP") into TCA, and was thus an indirect method for preventing the future formation of TCA. The radiation acted on the micro-organisms but not on the TCA. The second reference (FR-A-2798 879) related to an extraction process for removing TCA from cork materials using a pressurised fluid. This process for the elimination of TCA was thus completely different from the present process using irradiation.

IV. Using form PCT/ISA/228 dated 15/02/2005, a review board confirmed the lack of unity of invention, refused the refund of the additional search fees and invited the applicant to pay a protest fee pursuant to Rule 40.2(e) PCT. In the Annex sheet of form PCT/ISA/228, the review board considered the subject-matter of claim 1 to lack novelty over the "Zehnder et al." reference. Referring to tables 1 and 2 and of this document, it argued that the common concept between the four subjects mentioned in the partial search report, namely "a process for eliminating/reducing compounds with a musty taste/odour related to 2,4,6-trichloroanisol (TCA) in materials by irradiation of said materials with gamma-rays at a radiation dose of 15 to 400kGy", was not new in view of

D1 (Zehnder et al.). Therefore the application lacked unity.

V. In reply thereto the applicant paid the protest fee and submitted further arguments inter alia having regard to the contested lack of unity (see letter dated 15 March 2005).

Reasons for the Decision

1. The additional search fees were paid under protest in the sense of Rule 40.2(c) PCT. The protest complies with the requirements of Rule 40.2(c) and (e) PCT and is therefore admissible. The applicant's submissions referred to under point III and V above imply that the applicant wishes to have all additional search fees reimbursed.

2. There is a clear technical link between the four (groups of) inventions as identified by the ISA:

2.1 It is immediately apparent upon reading that the four (groups of) inventions and the four problems i) to iv) as identified and presented by the ISA on pages 1 and 2 of the "extra sheet" of form PCT/ISA/206 share a substantial number of features. They all concern "a process for eliminating/reducing compounds with a musty taste/odour in" a specific material, which process "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". The four inventions/problems as identified differ only by the type of the specific materials treated. These may be materials "that are to come in contact with foodstuffs", more specifically either i) "cork stoppers or other cork products" or ii) "packagings", or iii) "foods" or iv) "drinks".

2.2 Moreover, the actual process features of the four inventions as identified are always the same, and it is only the material treated that differs. Although four different technical problems can be formulated in view of the four different kinds of materials treated, these four problems are special cases of a more general problem, namely the problem of "eliminating/reducing compounds with a musty taste/odour in" a material. Moreover, the solution proposed is the same in all of the four cases identified by the ISA, namely "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".

3. From paragraph 2 on page 2 of the "extra sheet" of form PCT/ISA/206, it can be understood that the conclusion that the application lacks unity was reached based on a comparison of the features of the present claims with the disclosures of two prior art documents designated as "D1" and "D2". The board thus concludes that the ISA found the application to lack unity "a posteriori".

3.1 Since the partial search report dispatched with the invitation refers to two documents only, it can be assumed that "D1" and "D2" represent these two

documents, in the order in which they are listed in the partial Search Report. However, the ISA did not indicate whether the objection concerning lack of unity is based on the disclosure of each of D1 and D2 taken individually, or only on the basis of a combination the two disclosures. Moreover, the contents of D1 and D2 were not analysed and no relevant passages thereof were identified. The board did not overlook, in said paragraph 2, the reference made by the ISA to "Re Item V, points 2.a-b)" when mentioning D1 and D2. However, no text corresponding to this reference was dispatched together with the invitation (form PCT/ISA/206). The invitation is thus silent about the reasons possibly justifying the said conclusion. This part of the reasoning of the ISA is thus insufficient to motivate the objection raised.

3.2 The board has also examined whether the content of the notification of the review board (see form PCT/ISA/228 (Annex) mentioned above) might not be considered as making good this lack of motivation. This is not the case, as will appear from the following analysis of the prior art cited in the partial search report. In particular, the board does not accept that the arguments recited by the review board are sufficient to establish that "D1 discloses all the technical features of the process of claim 1".

3.2.1 According to the "Zehnder et al." reference, 2,4,6-trichlorophenol ("TCP") present in corks due to a pre-treatment thereof is converted microbiologically into the undesirable TCA under certain conditions, such as extended storage in a humid environment, see page 205, left-hand column, section "Chemische Untersuchungen",

the first two paragraphs. The said microbiological formation of TCA can be prevented by gamma-irradiating TCP-containing corks using an irradiation dose sufficient to sterilise the corks, i.e. to eliminate the micro-organisms responsible for the formation of TCA, see page 206, "Zusammenfassung", the last sentence of the first paragraph. These findings are corroborated by the experimental results presented in table 1 on page 206, and discussed on page 205, right-hand column, line 5 of said column down to line 7 of the section "Sensorische Untersuchungen". In these experiments, a gamma-irradiation dose of 25 kGy was applied to different kinds of corks before storing them in a humid atmosphere for 5 weeks, see page 204 to page 205, section "Material und Methoden".

The reference does not mention irradiating corks containing TCA at a dose sufficient to reduce/eliminate the TCA present in the corks before their irradiation. Table 2 referred to by the review board merely concerns the passage of TCA from corks into wine, using irradiated and non-irradiated cork stoppers. As pointed out by the review board, according to the values reported in table 1 of D1 "the concentration of TCA in irradiated cork stoppers is lower than that of non-irradiated cork stoppers". However, the TCA contents of the corks as indicated in table 1 have not been measured directly after their irradiation, but after storing them for 5 weeks in a humid atmosphere, i.e. under conditions favourable to the microbiological conversion of any TCP present to TCA. The TCA content of those specific cork stoppers that have been subjected to irradiation ("UCB" and "CB") has not been measured before their irradiation and is thus not

indicated. From D1, it is thus neither apparent whether the cork stoppers subjected to irradiation actually contained significant amounts of TCA before their irradiation, nor whether the sterilising irradiation dose applied was sufficient to reduce the concentration of the said TCA (if present), let alone to a level below the detection limit for consumers.

3.2.2 FR-A-2 798 879 is concerned with removing undesirable compounds such as TCA from cork, e.g. cork stoppers, by using a pressurised extraction fluid, see e.g. claims 1, 12 to 15 and 21; page 18 and page 19, lines 1 to 2. The document also briefly mentions earlier methods relying on gamma irradiation for suppressing the micro-organisms responsible for the production of undesired substances. However, no further details of this method are indicated, see page 4, lines 15 to 18 in conjunction with lines 26 to 28.

4. It is thus not apparent, at least not without further considerations, that these two documents, taken alone or in combination, could disclose or suggest the features quoted under point 2.2 herein above, which are shared by the four (groups of) inventions identified by the ISA. There is thus a technical relationship amongst the latter which involves these "special technical features" (in the sense of Rule 13.2 PCT), and the "single general concept" (in the sense of Rule 13.1 PCT) represented by these features has not been shown to be obvious. Therefore, the board concludes that there is unity of invention in view of D1. The applicant's protest is thus justified.

Order

For these reasons it is decided that:

Reimbursement of the three additional search fees and of the protest fee is ordered.

The Registrar: The Chairwoman:

C. Vodz M. Eberhard