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**D E C I S I O N**  
of 8 October 2002

**Case Number:** T 0048/99 - 3.3.2

**Application Number:** 90202156.7

**Publication Number:** 0473842

**IPC:** A23L 1/226

**Language of the proceedings:** EN

**Title of invention:**

Flavouring composition containing gamma-jasmolactone, the use of such a flavouring composition or gamma-jasmolactone *per se* for flavouring foodstuffs as well as the flavoured foodstuffs obtained

**Patentee:**

QUEST INTERNATIONAL B.V.

**Opponent:**

Bayer AG Konzernbereich RP Patente und Lizenzen

**Headword:**

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**Relevant legal provisions:**

EPC Art. 83, 54, 56

**Keyword:**

"Sufficiency of disclosure - not at issue: late filed ground in opposition"

"Novelty - yes - functional feature linked to a particular concentration range provides for novelty"

"Inventive step - yes - no incentive"

**Decisions cited:**

G 0010/91

**Catchword:**

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Case Number: T 0048/99 - 3.3.2

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.2  
of 8 October 2002

**Appellant:**  
(Opponent)

Bayer AG  
Konzernbereich RP  
Patente und Lizenzen  
D-51368 Leverkusen (DE)

**Representative:**

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**Respondent:**  
(Proprietor of the patent)

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**Representative:**

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**Decision under appeal:**

Interlocutory decision of the Opposition Division  
of the European Patent Office posted  
18 November 1998 concerning maintenance of  
European patent No. 0 473 842 in amended form.

**Composition of the Board:**

**Chairman:** P. A. M. Lançon  
**Members:** J. Riolo  
C. Rennie-Smith

## Summary of Facts and Submissions

- I. European patent No. 0 473 842 based on application No. 90 202 156.7 was granted on the basis of three claims.

Independent claims 1 to 3 as granted read as follows:

"1. Flavouring compositions having a fruity flavour character, characterized by an amount of 0.1-10 wt.% of synthesized gamma-jasmolactone having the formula



2. Food products having a fruity flavour character, characterized in that they contain an effective flavouring composition according to claim 1 or an effective flavouring amount of synthesized gamma-jasmolactone *per se*.
3. Process for imparting, enhancing or improving the fruity flavour character of foodstuffs, characterized by adding thereto an effective amount of a flavouring composition according to claim 1 or an effective flavouring amount of synthesized gamma-jasmolactone *per se*."
- II. Notice of opposition was filed against the granted patent by the appellant (opponent).

The patent was opposed under Article 100(a) for lack of novelty and inventive step EPC.

The following documents *inter alia* were cited during the proceedings:

- (1) J. Stoffelsma et al, "Closer to natural jasmin", Society of Cosmetic Chemists of GB, pages 1 to 5, (1973)
- (3) Agric. Biol. Chem. 44(7), 1535-1543 (1980)
- (5) Zeitschrift für Lebensmittel-Untersuchung und -Forschung, 196: 307-238 (1993)

III. The Opposition Division held that the set of claims submitted during the oral proceedings met the requirements of Articles 54 and 56 EPC. This set of claims corresponded to the set of claims as granted save that the expression "or an effective flavouring amount of synthesized gamma-jasmolactone per se" was deleted in claims 2 and 3.

As to the objection under Article 83 raised by the opponent for the first time during the oral proceedings, the Opposition Division expressed the view that this ground was late filed. Accordingly, it disregarded this objection.

Concerning novelty, the Opposition Division found that the subject-matter of claim 1 was novel since none of the available prior art document disclosed a composition having an amount of 0.1 to 10 wt% of synthesized gamma-jasmolactone.

It also held that the "fruity flavour character" recited in claims 2 and 3 of the patent in suit was a technical feature which provided for the novelty of these claims since the available prior art documents disclosed neither this feature nor the amount of gamma-jasmolactone required to achieve this flavour.

As regards inventive step, the Opposition Division was of the opinion that, as agreed by both parties, document (1) represented the closest state of the art.

It further defined the problem to be solved over this document as to enhance or to improve the fruity character of foodstuffs.

Although document (1) recited that gamma-jasmolactone had a creamy-fruity odour, the Opposition Division considered that this teaching did not render obvious its use for providing a fruity flavour character in food products.

Concerning document (5), the Opposition Division noted that, having regard to its publication date, this document did not form part of the state of the art. It moreover discarded it because it did not appear relevant for the assessment of inventive step.

- IV. The appellant lodged an appeal against the said decision.
- V. By its letter dated 10 September 2002, it informed the Board that it would not be attending the oral proceedings and asked for a decision based on its written submission.
- VI. Oral proceedings were held before the Board on 8 October 2002.
- VII. The appellant argued in writing that any natural product containing gamma-jasmolactone, such as Jasmin tea for instance, anticipated the claimed subject-matter of the patent in suit.

It submitted moreover that, as gamma-jasmolactone was known as a constituent of many food products, its use in such products as a flavouring agent having a fruity flavour character could not be regarded as inventive; the more so because there existed a close relationship between taste and smell.

The appellant sought to reintroduce objections under Article 100(b) EPC.

VIII. The respondent submitted that, in its view, the subject-matter of claim 1 of the contested patent was novel because the amount 0,1 to 10 wt% was not disclosed in any of the cited references.

As to the subject-matter of claims 2 and 3, it argued that none of the available prior art documents disclosed food products having a fruity flavour.

Concerning inventive step, the respondent held that nothing in the closest prior art document (1) suggested the use of the specific fruity character of gamma-jasmolactone for enhancing or improving a fruity flavour in foodstuffs.

IX. The appellant requested in writing that the decision under appeal be set aside and that the European patent No. 0 473 842 be revoked.

The respondent requested that the appeal be dismissed.

## Reasons for the Decision

1. The appeal is admissible.

2. *Article 83 EPC*

As is apparent from the text of the Opposition Division's decision, the ground of opposition under Article 100(b) EPC, raised for the first time during the oral proceedings, was refused as late filed by the first instance.

The Board sees no reason to differ from this conclusion.

Accordingly, Article 100(b) is a fresh ground of opposition which could have been considered during the appeal procedure only with the approval of the patentee (G 10/91, OJ 1993, 420), which was not the case.

3. *Article 54 EPC.*

The compositions according to claim 1 are characterized by the presence of gamma-jasmolactone in an amount of 0.1 to 10 wt%. Moreover, the claim requires that the compositions have a "fruity flavour character" ie the compositions must fulfill an additional functional feature.

According to the respondent, the amount range of gamma-jasmolactone of claim 1 is not an arbitrary one since it is precisely this range which is responsible for the fruity flavour character of the claimed compositions.

Without any evidence to the contrary, the Board concludes that the link between the functional feature

and the specific amount range of gamma-jasmolactone recited in the range in claim 1 establishes novelty over the available prior art documents which are silent as to these features.

Accordingly, the subject-matter of claim 1 of the contested patent fulfills the requirement of Article 54 EPC.

The same applies to the subject-matter of claims 2 and 3 dealing respectively with food products which contain the compositions of claim 1 and a process using it.

As to the appellant's argument, the Board observes that a mere statement that any natural fruits containing gamma-jasmolactone or any other natural products would destroy novelty of the claimed product, is not sufficient without any concrete data to support it.

In that respect, the Board notes that the only available value is disclosed in document (3) for peppermint oil wherein the gamma-jasmolactone represents about 1 ppm, which is remote from the claimed range.

4. *Article 56 EPC*

- 4.1.1 Document (1) deals with the identification of the constituents of Jasmin absolute. It describes the synthesis of gamma-jasmolactone as well as its identification in the extracted oil (page 1, lines 1 to 3; page 2, third paragraph, page 3, synthesis of compound VI).



Moreover, this document teaches that gamma-jasmolactone (ie compound VI) has a powerful but mild and creamy-fruity odour (page 3, last paragraph before "experimental").

The patent is concerned with the problem of providing flavouring compositions having a fruity flavour character, ie compositions perceived by the sensory organs when placed in the mouth.

- 4.1.2 As agreed by both parties, document (1), which discloses that gamma-jasmolactone has a powerful fruity odour, represents the closest state of the art.

The problem to be solved appears to be the extension of the uses of gamma-jasmolactone previously known to be odorous according to document (1) and the provision of compositions having correspondingly extended properties.

The problem is solved by the compositions of claim 1 of the contested patent which, when certain specific concentrations of gamma-jasmolactone are used, have a fruity flavour character, thus adding a fruity flavouring property to the known fruity odour property.

In the light of the working examples disclosed in the patent in suit, the Board is satisfied that the problem has indeed been solved. Although there exist some doubts as to the link between the flavouring effect and the specific range recited in claim 1, the Board observes that the appellant did not provide any evidence to the contrary. Moreover, in reply to a question of the Board during the oral proceedings, the respondent confirmed that the flavouring effect was only present within the claimed range.

The question to be answered is thus whether the proposed solution would be obvious to the skilled person faced with the problem defined above in the light of the prior art.

In the present case, the skilled person is obviously an expert in food products who knows the expectations of consumers and is always eager to use all the properties of known products. Trying to make the best uses of all of the properties of the constituents of food products is part of its daily tasks and desires.

As acknowledged by the respondent during the oral proceedings, the skilled person knows that gamma-jasmolactone is an edible product.

From document (1), he or she also knows that this lactone has a desirable odour which would certainly be of interest in food products.

However, although knowing that there might be a possible link between smell and flavour, the skilled person would *prima facie* only envisage the use of gamma-jasmolactone in food products because of its attractive fruity smell. In fact, nothing in the available prior art would prompt the use of gamma-jasmolactone for its flavouring properties.

Document (1) discloses that gamma-jasmolactone has a fruity smell. The skilled person could therefore envisage its use in food products for this property. However, there is no hint in the available prior art leading to the idea that a fruity flavouring could be also perceived for a specific concentration of gamma-jasmolactone.

It is precisely this teaching, that a fruity flavouring is added to the fruity smell within a restricted concentration range of gamma-jasmolactone, that is provided by the patent in suit.

In fact, the Board has no reason to believe that, while testing the interesting odour properties of gamma-jasmolactone in food products, the skilled person would inevitably work within the claimed range providing the flavouring effect. The more so because the sense of smell is extremely sensitive compared to the sense of flavour, requiring as a rule only minute quantities for detection.

In the absence of any evidence to the contrary, evidence which the burden of proof required the appellant to provide, it must be concluded that it was not obvious to look for a fruity flavour in the claimed range of gamma-jasmolactone.

Accordingly, the subject-matter of claim 1 involves an inventive step.

The same applies to the subject-matter of claims 2 and 3 which contains the compositions of claim 1.

- 4.1.3 The appellant mainly argued that the solution was obvious because of the close relationship existing between taste and smell. The Board does not share this opinion for the reasons given above (see 4.1.2).

Moreover the appellant did not substantiate its statement.

In that respect, as pointed out by the respondent during the oral proceedings, it is general knowledge in the field of flavouring that the sense of flavour occurs in the mouth while eating a product whereas

smelling involves the olfactory nerve endings in the upper part of the interior of the nose which are activated only when the material is in gaseous form and it does not require the product to be placed in the mouth.

Thus, having regard to these basic differences, there is *prima facie* no reason to assume that an odorous substance will *ipso facto* also possess interesting flavouring properties.

Under these circumstances, the Board concludes that the subject-matter of the set of claims as maintained by the Opposition Division involves an inventive step as required by Article 56 EPC.

## **Order**

**For these reasons it is decided:**

The appeal is dismissed.

The Registrar:

The Chairman:

A. Townend

P. A. M. Lançon