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Datasheet for the decision of 2 August 2007

Case Number: T 0517/04 - 3.3.02

Application Number: 95907491.5

Publication Number: 0667099

IPC: A21D 8/04

Language of the proceedings: EN

Title of invention:
Baking Process

Patentee:
KYOWA HAKKO KOGYO CO., LTD.

Opponent:
NESTEC S.A.

Headword:
Baking Process/KYOWA HAKKO

Relevant legal provisions:
EPC Art. 83
EPC R. 57a
RPBA Art. 10, 10a, 10b

Keyword:
"Sufficient disclosure (no): Functional feature; undue burden to carry out the invention"
"Late-filed requests not admitted: Articles 10(a) and (b) RPBA"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0517/04 - 3.3.02

D E C I S I O N
of the Technical Board of Appeal 3.3.02
of 2 August 2007

Appellant: (Opponent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 26 February 2004 rejecting the opposition filed against European patent No. 0667099 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman: U. Oswald
Members: H. Kellner
J.-P. Seitz

Summary of Facts and Submissions

I. European patent No. 0 667 099 based on application No. 95 907 491.5, filed in the EPO as WO 95/04463 and referring to the international patent application PCT/JP93/01091 was granted with 5 claims.

Claim 1 as granted read as follows:

"A method for making bread characterized in that a yeast of the genus Saccharomyces which exhibits coldsensitive fermentingability is added to a dough, wherein the cold-sensitive fermentingability means that the yeast can normally ferment at from 20 to 40°C and shows a fermentingability which is one third or below, of that of a commercial yeast at a temperature of from -2 to 15°C."

Further independent claims read:

"3. A dough which contains a yeast of the genus Saccharomyces which exhibits cold-sensitive fermentingability, wherein the cold-sensitive fermentingability means that the yeast can normally ferment at from 20 to 40°C and shows a fermentingability which is one third or below, of that of a commercial yeast at a temperature of from -2 to 15°C.

5. Saccharomyces cerevisiae RZT-3 (FERM BP-3871)."

Explanations with respect to the term "fermentingability" are to be found in the specification of the patent as granted: generation of

CO_2 gas under particular conditions is to be "employed as a criterion for determination of fermentingability". The corresponding data of CO_2 gas generation are set out in table 1 of the specification. For the purpose of comparison, the strain Saccharomyces cerevisiae RZT-3 is used as a yeast according to the teaching of the patent and a yeast named "YST" is used as "commercial yeast". YST, according to the patent specification and according to the application as filed is a yeast produced by the patentee himself.

II. Opposition was filed against the granted patent by the appellant under Article 100(a) EPC for lack of novelty and inventive step, under Article 100(b) EPC for insufficiency of disclosure and under Article 100(c) EPC because it contained subject-matter which had not originally been disclosed.

The following documents were cited inter alia during the proceedings before the opposition division and the board of appeal:

(1) EP-A-0 487 878

(2) WO-A-93 01724

III. The opposition division rejected the opposition.

It first noted that claim 1 of the granted patent fulfilled the requirements of Articles 100(c) and 123(2) EPC.

As to Articles 100(b) and 83 EPC, the opposition division expressed the view that the skilled person

would be able to carry out the invention without use of inventive skill and without an undue burden, particularly since the method of measurement of CO_2 emission was clearly and sufficiently disclosed and as the contested patent provided specific instructions for obtaining Saccharomyces cerevisiae RZT-3 and, by means of the examples, various manners in which the invention could be carried out.

Concerning Articles 100(a), 52(1) and 54 EPC, the opposition division was of the opinion that the subject-matter of claim 1 of the patent as granted was neither anticipated by the teachings of document (1) nor by the teachings of document (2). Additionally, with respect to Article 56 EPC, the subject-matter of that claim 1 was not obvious to the person skilled in the art in view of these documents, alone or in combination.

Considerations with respect to the subject-matter of independent claims 3 and 5 of the patent as granted were missing in the contested decision.

IV. The appellant (opponent) lodged an appeal against said decision and filed grounds of appeal.

V. Dated 19 March 2007, a communication was sent out expressing the board's concern with respect to Article 123(2) EPC and to the question whether the core of the subject-matter of the patent in suit, as it appeared to be represented by the content of its table 1, was accurately expressed by the wording of the current claims (as granted).

The board continued its communication, raising *inter alia* the questions,

– whether RZT-3 could be generalised to cover the whole of the genus Saccharomyces by means of the functional feature "coldsensitive" and its definition,

and

– whether the properties of "YST" could be expressed in a generalised way by using the term "commercial yeast".

VI. With a letter dated 21 May 2007 the respondent introduced three sets of amended claims as new main request and auxiliary requests 1 and 2 into the appeal proceedings:

Claim 1 of the main request reads as follows (amendments in relation to claim 1 of the patent as granted in bold):

"A method for making bread characterized in that a yeast of the genus Saccharomyces which exhibits cold-sensitive fermentingability is added to a dough, **wherein said yeast is a mutagenised strain obtainable from a commercial yeast** wherein the cold-sensitive fermentingability means that the yeast **shows the same fermentingability as that of the commercial yeast** at from 20 to 40°C and shows a fermentingability which is one third or below, of that of **the** commercial yeast **between** -2 **and** 15°C."

Claim 1 of auxiliary request 1, with respect to the wording of claim 1 of the main request, is characterised by the replacement of the term

"genus Saccharomyces" by the term "species Saccharomyces cerevisiae".

Claim 1 of auxiliary request 2 reads (amendments in relation to claim 1 of the patent as granted in bold):

"A method for making bread characterized in that a yeast of the genus Saccharomyces which exhibits cold-sensitive fermentingability is added to a dough, wherein the cold-sensitive fermentingability means that the yeast **shows the same fermentingability as that of the commercial yeast Saccharomyces cerevisiae YST** at from 20 to 40°C and shows a fermentingability which is one third or below, of that of **the** commercial yeast **Saccharomyces cerevisiae YST between** -2 **and** 15°C."

VII. On 2 August 2007, oral proceedings took place.

VIII. The submissions of the appellant in written form and during the oral proceedings can be summarised as follows:

In support of its objections with respect to Article 100(b) EPC, insufficiency of disclosure, and referring to the tables submitted by the respondent with its letter of 5 July 2007, it stated that there was not even one example in the proceedings meeting the criteria for desired yeasts as set out in claim 1 respectively of the current requests, because the CO_2 gas generation at 20°C was far from indicating the "same fermentingability".

Additionally, as could be seen from figure 13 in document (2), the amount of CO_2 generated was highly

dependent on the time elapsing between the start of the experiment and the measuring. Thus, the ratios of CO_2 development for different yeasts - even if they were derived from one another by mutagenisation and selection - would differ in the sense that they would be within the range defined in the patent in suit at one time of measuring and out of this range at another time.

With respect to claim 1 of auxiliary request 2, the public availability of the yeast "YST" at the date of filing of the application was contested.

In any case, it was an undue burden for the skilled person to find out which strains of mutagenised yeasts were cold-sensitive within the meaning of the patent and which were not.

IX. The respondent's arguments in writing and during the oral proceedings were as follows:

The claims as requested met the requirements of Article 100(b) EPC since it was clear from the description that measurement of CO_2 gas generation was the criterion of determination of fermentingability and since the skilled person was able to use the methods described in the opposed patent as directed therein.

Additionally, because the invention required the comparison of fermentingability between strains of yeast, the actual method used for the determination of CO_2 gas generation was irrelevant - as long as the same method was used for the strains compared in one experiment.

This was all the more true with respect to the teaching of claim 1 respectively of the main and the first auxiliary request, because there a comparison had to be conducted between a strain of Saccharomyces (cerevisiae) and the mutagenised strain obtained from it. As long as time ranges for the development of CO_2 were chosen in a not totally abnormal way, reproducible results with respect to the ratios of CO_2 development could be arrived at in any case.

In particular, the wording of these claims was not directed to compare the results of CO_2 development of experiments conducted with different material at different times in different laboratories.

With respect to the value of CO_2 gas generation at 20°C, it had to be taken into account that this was the region of exponential growth of CO_2 gas generation and therefore the values could differ and still mean the "same" fermentingability.

As was stated in the application as filed, "YST strain" was a commercial bread yeast produced by the patentee. It was on sale to the public on the date of the patent application and was of constant quality. This was supported by said mention in the text of the application; further evidence was not necessary.

X. During the oral proceedings, the respondent sought to introduce two new sets of claims as auxiliary requests 3 and 4. They were not admitted into the proceedings.

XI. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent No. 0 667 099 be revoked.

XII. The respondent (patentee) requested that the decision under appeal be set aside and that the patent be maintained on the basis of either his main request filed on 21 May 2007 or auxiliary requests 1 or 2 filed on the same date, or further on the basis of auxiliary requests 3 and 4 filed during the oral proceedings before the board of appeal.

Reasons for the Decision

1. The appeal is admissible.

2. According to Article 10 of the Rules of procedure of the Boards of Appeal (RPBA), a board shall remit a case to the department of first instance if fundamental deficiencies are apparent in the first instance proceedings, unless special reasons present themselves for doing otherwise.

Since the patent in suit had been filed in 1993 and a remittal would have prolonged the legally uncertain situation with respect to its validity, the board decided not to remit the case, even if the absence of arguments with respect to independent claims 3 and 5 could probably be seen as a fundamental deficiency in the decision of the opposition division. Under these circumstances, however, there was no need for a factual decision on the question of a fundamental deficiency.

3. The two sets of claims, auxiliary request 3 and auxiliary request 4, which the appellant sought to introduce during the proceedings, were late-filed.

The first of them tried to provide an answer to the problem of obtaining reproducible relations between values of CO_2 gas generation after different measurement times by adding a period of 2 hours in claim 1. But this period was originally disclosed in context with a complex procedure for preparation of the sample and measurement. *Inter alia,* therefore, and because of various problems with regard to clarity, it was not *prima facie* allowable. These problems in principle did not differ from the problems set out in a more general manner in the communication from the board and ultimately refer to Article 100(b) and (c) EPC as grounds for the opposition.

The second set of claims did not provide an answer to newly-raised arguments (Rule 57a EPC). It could have been submitted at any time during the procedure before the opposition division and before the board within the provisions of its Rules of Procedure (RPBA), in particular Articles 10a and 10b RPBA as in force of 1 May 2003 (OJ EPO 2003, 89 and 61).

The notice of appeal was dated 16 April 2004.

The board exercised its discretion and did not admit these two requests into the proceedings (Article 10b RPBA).

4. *Main request*

5. Claim 1 refers to a method of making bread. Such a method in principle comprises numerous procedural steps and various ingredients to be used. The claim does not define all steps and ingredients. Only one procedural step (adding of yeast to a dough) is mentioned and only features with respect to one single ingredient (the yeast) are provided. The yeast to be added, in addition to the mention of its genus "Saccharomyces", is characterised by the functional feature "cold-sensitive fermentingability". This functional feature is expressed as "show[ing] the same fermentingability as that of the commercial yeast at from 20 to 40°C and show[ing] a fermentingability which is one third or below, of that of the commercial yeast between -2 and 15°C". "The criterion for determination of fermentingability" employed is CO_2 gas generation under particular conditions (see patent specification, page 3, line 42, to page 4, line 33).

In principle, a method may be characterised by only a part of its procedural steps and ingredients, leaving the others open. Additionally, functional features are permissible under certain circumstances and as long as they provide sufficient instructions for the expert to reduce them to practice without undue burden or inventive ingenuity.

In this context, the first question to be answered is how to read the functional feature "cold-sensitive fermentingability" contained in claim 1 of the main request. While "cold-sensitive" is explained in additional words in the claim, there is no definition

of "fermentingability" in the patent in suit. According to the patent specification, page 3, line 42, "CO_2 gas generation" is merely to be employed as a criterion for determination of fermentingability, but this wording in its literal sense is neither a definition nor does it clarify what is meant by "fermentingability".

On the other hand, according to the context of the description as a whole, in particular table 1 and the paragraph following this table, "fermentingability" is used as a synonym for CO_2 gas generation. This applies both to the application as originally filed and to the specification of the patent in suit, including the substitution of all the terms "fermentation", "fermentability" and "ability of fermentation" by the single term "fermentingability".

It is therefore accepted that "fermentingability" has to be directly measured as the generation of CO_2 gas. Accordingly, in order to put the functional feature to practice, the skilled person arbitrarily has to take a strain of "Saccharomyces" and has to test whether or not the measured values for CO_2 gas generation fit into the claimed pattern. Thus, at first glance, the skilled person just is expected to use the particular measuring procedure disclosed in the patent in suit (see patent specification, page 3, line 52, to page 4, line 9).

If the results of this measurement indicate a failure of matching the correlation pattern of CO_2 gas generation, however, the person skilled in the art has to test another strain and try again. There are no instructions in the patent in suit to guide him in a systematic way towards success. Neither the patent

specification nor the relevant common general knowledge provides guidance on how systematically to find strains with which to start and how to proceed in order to arrive at a yeast product matching the functional feature as requested.

This still holds when the skilled person takes into account that the description of the patent in suit provides for a procedure of mutagenisation and selection in order to arrive at strains meeting the criteria, because the last step of the selection comprises nothing more than precisely that type of measuring CO_2 gas generation.

Additionally, the person skilled in the art has to take into account that even if a particular method of measuring CO_2 gas generation is described in the patent in suit, the subject-matter of claim 1 comprises the use of yeast strains matching the described pattern of "cold-sensitive fermentingability" also on the basis of any further way of measuring of CO_2 gas generation. In order to find yeast strains exhibiting "cold-sensitive fermentingability" within the meaning of this claim 1, he may find some strains using the disclaimed measuring procedure (naturally having adjusted measuring time in a reasonable way to different types of yeast used by him as starting material) but he is still far from knowing whether or not using other methods of measuring CO_2 gas generation would enable him to find many other strains. Thus, he has to conduct additional experiments to see whether different methods of measuring the CO_2 gas generation of yeasts provide comparable results and in each of the experiments he has to adjust the reasonable time for measurement.

Further, since the subject-matter of claim 1 is not restricted to the strain RZT-3 as deposited and because its generalisation by means of the functional feature "cold-sensitive fermentingability" comprises any yeast meeting the criteria of this functional feature, the only disclosed way of putting it into practice in using this particular strain is not enough to provide for sufficient disclosure.

Under these circumstances, the objection of the appellant that not even RZT-3 would meet the conditions of claim 1 need not be discussed further.

Taking these problems into account, the board comes to the conclusion that the teaching of the patent in suit including the amendments as requested and referring to a method for baking bread, amounts to a mere invitation to perform a research programme and results in an undue burden of experimentation such that it cannot be carried out by a person skilled in the art (Article 100(b) EPC).

5. *Auxiliary request 1*

Since the only difference between the subject-matter of claim 1 of auxiliary request 1 and the subject-matter of claim 1 of the main request is the restriction of the yeast to be used from the genus "Saccharomyces" to the species "Saccharomyces cerevisiae" and since even the species comprises an indefinite number of strains to start with for experimentation, the same arguments hold for this teaching as for the teaching of the main request.

6. *Auxiliary request 2*

The subject-matter of claim 1 of auxiliary request 2 differs from that of the main request in respect of the feature according to which, instead of the mutagenised strain itself, the commercial yeast "Saccharomyces cerevisiae YST" is used as a reference for comparing CO_2 gas generation.

But there is no difference with respect to insufficiency of disclosure since the same arguments apply as for the subject-matter of the main request. Again, the person skilled in the art has to perform his experiments at random and to an unknown extent. Only the subject for comparison is different.

7. The respondent's arguments cannot hold:

Even if, when measuring CO_2 gas generation, the system of defining "cold-sensitive fermentingability" on the basis of an actual comparative experiment rather than a standard procedure can rule out numerous problems, there still remain too many problems to be solved when trying to carry out the teaching of the requested claim 1, as can be seen from the argumentation above.

8. Therefore, the requirement of sufficient disclosure (Article 100(b) EPC) is not fulfilled by the teaching of these claims together with the description of the patent in suit and the common general knowledge of the skilled person.

Additionally, under these circumstances, since a request can only be decided on as a whole, there is no need to consider the further independent claims. They fall with the respective claim 1 of all requests.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

A. Townend U. Oswald