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**Datasheet for the decision  
of 19 April 2007**

**Case Number:** T 0363/05 - 3.3.09

**Application Number:** 93907195.7

**Publication Number:** 0627886

**IPC:** A23G 3/30

**Language of the proceedings:** EN

**Title of invention:**

An improved process for manufacturing wax-free chewing gums  
with fast set-up times

**Patentee:**

WM. WRIGLEY JR. COMPANY

**Opponents:**

Pfizer Inc.  
PERFETTI VAN MELLE S.p.A

**Headword:**

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**Relevant legal provisions:**

EPC Art. 83

**Keyword:**

"Sufficiency of disclosure - no"  
"Method of determining parameter not disclosed"

**Decisions cited:**

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**Catchword:**

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Case Number: T 0363/05 - 3.3.09

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.09  
of 19 April 2007

**Appellant 01:** Pfizer Inc.  
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**Appellant 02:** PERFETTI VAN MELLE S.p.A.  
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**Respondent:** WM. WRIGLEY JR. COMPANY  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
18 January 2005 concerning maintenance of  
European patent No. 0627886 in amended form.

**Composition of the Board:**

**Chairman:** P. Kitzmantel  
**Members:** J. Jardón Álvarez  
M. B. Tardo-Dino

## Summary of Facts and Submissions

I. The grant of European patent No. 0 627 886 in respect of European patent application No. 93907195.7 in the name of WM. WRIGLEY JR. COMPANY, which had been filed on 2 March 1993, was announced on 16 January 2002 (Bulletin 2002/03) on the basis of 21 claims. Independent Claims 1 and 21 read as follows:

"1. A method of making a wax-free chewing gum having an initial soft bite comprising:

mixing selected wax-free chewing gum ingredients which provide a chewing gum with an initial soft bite as measured by having a Taber Stiffness ranging from 15 to 55 Taber Units, thereby forming a raw mixture;

tempering the raw mixture for less than 30 minutes to form a tempered mixture; forming said tempered mixture into scored gum sheets;

tempering the gum sheets for from 6 to 24 hours, thereby forming tempered gum sheets, then processing the tempered gum sheets to a finished chewing gum product.

21. A chewing gum including the gum base and water soluble bulking agents as described in claim 20 wherein the glycerin modified binder is a glycerin modified hydrogenated starch hydrolysate comprising from 20 to 30 wt% glycerin, from 7 to 10 wt% water, and hydrogenated starch hydrolysate solids, and further wherein the chewing gum is a low moisture chewing gum having less than 2.0 wt% water based on the total chewing gum weight."

Claims 2 to 20 were dependent claims.

II. Two Notices of Opposition requesting the revocation of the patent in its entirety on the grounds of Article 100(a) EPC for lack of novelty and inventive step, Article 100(b) EPC for lack of sufficient disclosure and 100(c) EPC for subject-matter which extended beyond the content of the application as originally filed were filed against this patent by:

PFIZER INC. (Opponent 01) on 14 October 2002 and by

PERFETTI VAN MELLE S.p.A (Opponent 02) on 16 October 2002.

In the course of the opposition proceedings, *inter alia* the following documents were filed:

D1: US - 4 382 963;

D2: US - 4 604 287;

D4: US - 5 023 093;

D6: US - 3 984 574;

D9: US - 4 555 407;

D12: US - 4 045 581;

D15: Stiffness of paper and paperboard (Taber-type stiffness tester) TAPPI test method T 489 om-92;  
and

D16: Standard method of test for Taber Stiffness TST I  
(date and author unknown).

III. By its interlocutory decision announced orally on 17 November 2004 and issued in writing on 18 January 2005, the Opposition Division found that the patent in amended form (Claims 1 to 18 as filed during the oral proceedings) met the requirements of the EPC.

Claim 1 as maintained by the Opposition Division read as follows:

"1. A method of making a wax-free chewing gum stick having an initial soft bite as measured by having a Taber stiffness ranging from 15 to 55 Taber units comprising:

    mixing selected wax-free chewing gum ingredients to form a raw mixture;

    tempering the raw mixture for less than 30 minutes to form a tempered mixture;

    forming said mixture into scored gum sheets;

    tempering the gum sheets for from 6 to 12 hours, thereby forming tempered gum sheets, then

    processing the tempered gum sheets to a finished chewing gum stick product."

The Opposition Division held that the application disclosed the invention in a manner sufficiently clear and complete for it to be carried out by the skilled person, essentially because no evidence was on file that the Taber stiffness test according to D15 could not successfully be applied to chewing gum. The Opposition Division further considered that there were

sufficient examples and instructions in the description of how to prepare a chewing gum according to the claimed method.

The Opposition Division held further that neither D1 nor D2 anticipated the claimed subject-matter. Concerning inventive step the Opposition Division saw the problem to be solved by the patent in suit with regard to the closest prior art D4, as the provision of a method for producing wax-free chewing gum with initial soft bite. This problem was solved by the claimed method including two tempering steps. An inventive step was recognised because there was no hint in D12 or in D9 to reduce the tempering times in order to provide wax-free chewing gum with initial soft bite.

IV. Two appeals were filed against the decision of the Opposition Division.

On 11 March 2005, the Opponent 02 (Appellant 02) lodged an appeal against the decision of the Opposition Division and paid the appeal fee on the same day.

On 21 March 2005, the Opponent 01 (Appellant 01) also lodged an appeal against the decision and paid the appeal fee on the same day.

Both Appellants requested that the decision under appeal be set aside and the European patent be revoked in its full extent. They argued that the requirements of Articles 83 and 56 EPC were not met. Appellant 02 further maintained that the subject-matter of Claim 1 extended beyond the content of the application as filed (Article 123(2) EPC) and Appellant 01 that the subject-

matter of Claim 1 lacked novelty over the disclosures of D1, D2, D4 and D6.

V. By letter dated 11 October 2005, the Respondent (Patent Proprietor) disputed all the arguments submitted by the Appellants and requested that the Opposition Division's decision be upheld and that the appeals be dismissed in their entirety.

The Respondent also requested that if its main request was rejected, the patent be maintained in amended form based on Claims 1 to 17 of the auxiliary request therewith filed.

Claim 1 of the auxiliary request, as corrected by letter dated 7 September 2006, read as follows:

"1. A method of making a wax-free chewing gum stick having an initial soft bite as measured by having a Taber stiffness ranging from 15 to 55 Taber units comprising:

    mixing selected wax-free chewing gum ingredients to form a raw mixture;

    forming the raw mixture into loaves;

    tempering the loaves for from 10 to 30 minutes at essentially constant temperature and relative humidity to form tempered loaves;

    collecting and blending the tempered loaves into a semi-fluid extrudable gum mass having a temperature of at least 5°C above the temperature of the tempered gum loaves;

    processing the fluid gum mass into essentially continuous gum strip;

processing the continuous gum strip into quadrilaterally scored and trimmed gum sheet; tempering the scored and trimmed gum sheet for from 6 to 12 hours at an essentially constant selected temperature ranging from 16°C (60°F) to 26°C (80°F) and at an essentially constant relative humidity for the selected temperature ranging from 35 to 55 percent thereby obtaining tempered, scored gum sheet; and

processing the tempered scored gum sheet into a finished chewing gum stick product."

VI. In response to the Board's communication, issued on 23 January 2007 in preparation for the oral proceedings, the Respondent filed with letter dated 16 March 2007 four more auxiliary requests to supplement the main request and the first auxiliary request on file.

Compared to the main and the first auxiliary requests, the following amendments were made to these requests:

- Second auxiliary request. Claim 1 of this request is a combination of Claims 1 and 14 of the main request.
- Third auxiliary request. Claim 1 of this request is a combination of Claims 1, 14 and 18 of the main request, further incorporating features from granted Claim 21.
- Fourth auxiliary request. Claim 1 of this request is a combination of Claims 1 and 13 of the first auxiliary request.
- Fifth auxiliary request. Claim 1 of this request is a combination of Claims 1, 13 and 17 of the first



auxiliary request, further incorporating features from granted Claim 21.

The Respondent also filed two further documents:

D17: WO - A - 92/08369 and

D18: US - 4 959 266,

which disclose Taber stiffness tests in conjunction with chewing gum in order to illustrate that the test was known to a person skilled in the art to be applicable to chewing gum.

VII. The arguments presented by the Appellants in their written submissions and at the oral proceedings held on 19 April 2007, insofar as they are relevant for the present decision, may be summarized as follows:

- Appellant 01 maintained that the patent was insufficiently disclosed. It pointed out that the language of the claims was merely a redrafting of the result to be achieved. Claim 1 was silent about the chewing gum ingredients, except of the fact that they should not include wax. The tempering steps employed in Claim 1 amounted to nothing more than a definition of rapid or fast set-up time. Also, the specification was silent on any specific measures, except for the wax-freeness, to be taken to achieve a rapid set-up time. Moreover there was no indication in the specification of how to obtain the required initial soft bite.

- Appellant 02 pointed out that the patent violated Article 83 EPC because the specification did not define the specific conditions and methods required to perform Taber stiffness measurements on chewing gums. The method according to D15 applied to cardboard and paper and its application to chewing gum would require adaptations which were unspecified. The absolute values of Taber stiffness given in Claim 1 were affected by the test conditions, such as for example the thickness of the gum sticks, the conditions of temperature and humidity during the test, and the time after production when the measurements were carried out. The reference to two weeks in the examples was purely for comparative purposes and could not be interpreted as a disclosure that this time lapse should generally be observed for the Taber stiffness measurement set out in Claim 1. In any case, different test conditions would result in different absolute values of Taber stiffness.

VIII. The arguments presented by the Respondent, insofar as they are relevant for the present decision, may be summarized as follows:

- The claimed method was specified in the patent in suit in a sufficiently precise manner. On the basis of his general common knowledge, the skilled person would without undue burden be able to produce chewing gums having the claimed Taber stiffness values by choosing the ingredients taking account of the examples in the specification together with a small amount of routine experimentation. The test for Taber stiffness was a standard test which had

been around for over fifty years. In its view, there was no evidence to disprove the prima facie assumption that the exemplified chewing gums have Taber stiffness values falling within the claimed range.

- Concerning the measurement of Taber stiffness, the Respondent acknowledged that the values could vary with the thickness but argued that the thickness of the sticks was more or less standard for chewing gums. Moreover, the specification clearly specified that Taber stiffness should be measured two weeks after manufacture. The fact that this information was given in connexion with two specific examples was for the skilled person irrelevant as this was the only value that could be found in the specification.

IX. The **Appellants** requested that the decision under appeal be set aside and that the European patent No. 0 627 886 be revoked.

The **Respondent** requested that the appeals be dismissed, or alternatively that the patent be maintained on the basis of Claims 1 - 17 filed with letter dated 7 September 2006 (first auxiliary request), or on the basis of the claims of the second to fifth auxiliary requests filed with letter dated 16 March 2007.

## Reasons for the Decision

1. The appeals are admissible.

### MAIN REQUEST.

2. *Sufficiency of disclosure (Article 83 EPC).*
  - 2.1 The subject-matter of Claim 1 of the main request relates to a method of making a wax-free chewing gum stick having an initial soft bite as measured by having a Taber stiffness ranging from 15 to 55 Taber units comprising mixing selected ingredients to form a raw mixture, tempering the raw mixture, forming scored gum sheets, tempering the gum sheets and processing them to a finished chewing gum stick product.
  - 2.2 It is thus clear that the (wax free) chewing gum ingredients and the process conditions should be chosen in such a manner that the resulting chewing gum stick has a Taber stiffness ranging from 15 to 55 Taber units.
  - 2.3 Consequently, for the implementation of the method according to Claim 1 the skilled person needs to determine the Taber stiffness of the obtained chewing gum sticks in a reliable and reproducible manner.
  - 2.4 The question to be answered is whether or not the skilled person is taught by the specification of the patent in suit, or would already know because it was a standard test, how to determine the Taber stiffness of the chewing gum sticks obtained by the method of Claim 1.

- 2.5 The patent specification does not contain any instructions about how to put the Taber stiffness into practice in order to obtain reproducible results in a reliable manner. The only references in the specification to Taber stiffness are in paragraph [0069], where it is stated that the manufactured wax-free sticks have a Taber stiffness from 15 to 55 Taber units and that this value is at least 5 percent less than a comparable wax containing gum, and in examples 141 to 144, wherein Taber stiffness data are given to demonstrate differences in softness between gum made with wax-free base and gum made with wax-containing base (see paragraphs [0087] - [0088]).
- 2.6 The Respondent accepted that the patent does not describe the test method for determining the Taber stiffness, but argued that the test was a standard test which had been used for over fifty years. In support of this statement, it filed documents D15 and D16 during the examination proceedings and documents D17 and D18 during the appeal proceedings.
- 2.6.1 Document D15 refers to a method for measuring the stiffness of paper and paperboard (Taber-type stiffness tester). According to Appellant 02 this method cannot be applied as such to chewing gum sticks and requires modifications. Taking into account that in order to obtain reproducible test results uniform specimen size is critical, and considering the fact that the patent in suit is completely silent about these parameters, in the Board's judgement D15 is not a document which provides the skilled person with sufficiently complete information about how to determine the Taber stiffness of chewing gums.

2.6.2 Document D16 is a non-dated document, probably an internal document of the patent proprietor Wrigley describing a "Standard method of test for Taber stiffness". In the absence of a publication date for this document, the Board cannot take such document as proof that the method therein described represents a standard method of measuring the Taber stiffness which would have been known to the skilled person at the relevant time.

2.6.3 Documents D17 and D18 are two Wrigley patents wherein Taber stiffness values are measured. In D17 the Taber stiffness values were measured by the Taber V-5 stiffness tester method, Model 150B (D17, page 7, lines 18 - 20) and in D18 a Teledyne Taber machine, model 150-B, was used for measuring sticks of 3/4" wide and 0.076" thick (column 7, lines 28 - 30).

Document D17 is very relevant for the understanding of the measurement of Taber stiffness. According to this document, the Taber stiffness value is a measure of the chewing gum's resistance to bending. The lower the value, the longer the chewing gum remains flexible. Table 1 of D17 shows that there is a great change of the Taber values during storage. Thus, the Taber values of the examples of D17 increase from the day of preparation until the last measurement, made 21 days later (see Table 1: for Comparative Example 1 the Taber value after preparation (day 0) is 10.3 and rises after 21 days to 86.2; similar results are given for the other examples in this table).

2.7 D17 thus clearly confirms the objections of the Appellant 02 that the Taber stiffness of a chewing gum does not depend only on its composition but it is also highly affected by a number of other variables relative to the Taber stiffness test conditions, such as for example the temperature and humidity during the test, the thickness of the sticks and in particular the time after production when the measurements are carried out.

2.8 The specification of the patent in suit (see paragraph [0069]) is completely silent about the test conditions for the Taber Stiffness. In examples 141 to 144 Taber stiffness data taken two weeks after manufacture are given for the purposes of comparison of the claimed wax-free chewing gum with wax-containing chewing gum.

The Respondent argued during the oral proceedings that the reference to two weeks after manufacture in these examples was a clear disclosure in the specification of the time after production at which the test should be made.

2.9 The Board cannot accept these arguments of the Respondent. In examples 141 to 144 a comparison between different chewing gums is made to show that wax-free gum gives a softer initial bite than chewing gum containing wax [see paragraph [0088]]. For this comparative purpose the Taber values indicated are useful in spite of the lack of information on the test conditions used because it is legitimate to assume that all tests have been performed under the same conditions, allowing relative conclusions. Incidentally, the Board also notes that in D17 and D18 Taber values are used only for comparison of different chewing gums.

In Claim 1, however, the Taber stiffness values are absolute values which, in the absence of the test conditions, are not significant at all as they vary considerably with said conditions. Neither can the Board accept the time period of two weeks after manufacture as the point in time to be taken by the skilled person for the Taber stiffness measurement, because there is no information in the specification justifying the generalisation of this time period, which was chosen arbitrarily for the above mentioned comparison purpose only. As shown by the data in Table 1 of D17 this measurement parameter is of the utmost importance as the Taber stiffness values of chewing gums increase steadily and do not stabilize to a constant value two weeks after production, but continue to increase with time.

- 2.10 In summary, the patent in suit does not disclose any precise information of the test conditions to be used in order to evaluate the Taber stiffness, these being conditions on which the Taber stiffness values depend to a critical extent. Since the Taber stiffness value range represents an essential feature of the claimed invention, the fact that the Taber stiffness, as it is disclosed in the specification, cannot be determined by the skilled person in a reliably reproducible manner prevents the implementation of the claimed subject-matter, contrary to the requirements of Article 83 EPC.

Consequently, the claimed invention is not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Therefore, the main request is refused.



FIRST TO FIFTH AUXILIARY REQUESTS.

3. *Sufficiency of disclosure (Article 83 EPC).*

3.1 The subject-matter of Claim 1 of all the auxiliary requests is also directed to a method of making a wax-free chewing gum stick having an initial soft bite as measured by having a Taber stiffness ranging from 15 to 55 Taber units.

3.2 Thus the subject-matter of these auxiliary requests suffers from the same deficiency under Article 83 EPC as the main request and these requests are likewise refused.

4. In summary, none of the Respondent's requests is allowable.

**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:

G. Röhn

P. Kitzmantel