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Datasheet for the decision
of 30 April 2014

Case Number: T 2403/11 - 3.3.09
Application Number: 01974996.9
Publication Number: 1311165
IPC: A23L1/0532, A23L1/0526, A23P1/12, A22C13/00, A23P1/08, A23L1/317
Language of the proceedings: EN

Title of invention:
COMPOSITION AND METHOD FOR COATING FOODSTUFFS

Patent Proprietor:
Ruitenbergs Ingredients B.V.

Opponents:
CARGILL, INCORPORATED
ISP INVESTMENTS LLC

Headword:

Relevant legal provisions:
EPC Art. 100(b)

Keyword:
Grounds for opposition - insufficiency of disclosure (yes)

Decisions cited:
T 0492/92, T 0882/03, T 0593/09
Catchword:

An ill-defined parameter in a claim may lead to insufficiency of disclosure if this parameter is relevant for solving the problem addressed in the patent (T 593/09 followed). If, in such a situation, the patent specification states that the ill-defined parameter is relevant and the patent proprietor initially argued along those lines, then, normally it cannot argue, later on in the proceedings, that this parameter does not matter (points 2.6.1 and 2.6.2 of the Reasons).
Case Number: T 2403/11 - 3.3.09

DECISION
of Technical Board of Appeal 3.3.09
of 30 April 2014

Appellant: Ruitenbergen Ingredients B.V.
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Representative: Algemeen Octrooi- en Merkenbureau B.V.
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Decision under appeal: Decision of the Opposition Division of the European Patent Office posted on 23 September 2011 revoking European patent No. 1311165 pursuant to Article 101(3)(b) EPC.
Composition of the Board:

Chairman: W. Sieber
Members: M. O. Müller
         F. Blumer
Summary of Facts and Submissions

I. This decision concerns the appeal filed by the proprietor of European patent No. 1 311 165 against the decision of the opposition division to revoke the patent.

II. In the notices of opposition, opponent I (Cargill, Incorporated) and opponent II (ISP Investments LLC) had requested revocation of the patent in its entirety on the grounds that the claimed subject-matter was neither novel nor inventive (Article 100(a) EPC, opponents I and II), and that the patent did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC, opponent I).

The documents submitted during the opposition proceedings included:

E6: "Thickening and Gelling Agents for Food", A. Imeson (ed.), Chapman & Hall, 1992, 18 pages; and


IV. The decision of the opposition division, which was announced orally on 8 September 2011 and issued in writing on 23 September 2011, was based on the patent as granted (main request) and a first and a second auxiliary request.
Claim 1 as granted reads as follows:

"1. Composition for coating foodstuffs which comprises a first polysaccharide that is negatively charged in the composition and gels under the influence of cations, the first polysaccharide comprising alginate, and at least a second polysaccharide, which is neutral in the composition, the second polysaccharide comprising galactomannans, the composition comprising 2-7 w/w% alginate and having a viscosity of 80-110 Pa.s at a temperature of 20°C."

In the same way as claim 1 as granted, claim 1 of each of the first and second auxiliary requests contained the requirement that the composition has a viscosity of 80-110 Pas at a temperature of 20°C.

The opposition division's position can be summarised as follows:

None of the requests met the requirements of Article 100(b) EPC. It had not been substantiated that there was a particular method in the prior art which had to be used to determine the viscosity. The skilled person was therefore faced with a number of choices as to which procedure to use, choices which influenced the outcome of the measurement. While claim 1 specified which temperature had to be employed, further conditions such as the selection of the viscosimeter, as well as the container used and the sample pre-treatment, had to be selected and there was no unambiguous instruction on these choices. In fact, given that D10 (section 11 "Report") specified that these conditions had to be controlled, the skilled person would infer that these conditions had an
appreciable effect on the measurement. It also appeared from D10 that the spindle/speed combination had a major bearing on the outcome of the measurement. This was further demonstrated by the proprietor itself in its letter of 8 August 2011, which showed large differences in the measured viscosity at different spindle speeds. It could therefore only be concluded that it had not been proven that the skilled person knew which method to use, and, within a single method, the number of selections required inevitably led to different results. Reproducing the invention thus required a significant effort which went beyond any normal trial and error. As the viscosity was an essential parameter in practising or reproducing the invention, without proper instruction on this parameter the skilled person was not able to perform the invention.

V. On 10 November 2011, the proprietor (hereinafter: the appellant) filed an appeal and, on the same day, paid the prescribed fee (the appeal was re-filed on 11 November 2011 with a corrected date for the opposition division's decision).

VI. The statement setting out the grounds of appeal was filed on 23 January 2012 together with

D12: Experimental report of DIL German Institute of Food Technologies, dated 17 January 2012 (filed as "Exhibit 1"); and

D13: Experimental report of Eurofins, dated 23 January 2012 (filed as "Exhibit 2").

VII. A response was filed by opponent I (hereinafter: the respondent) with its letter of 30 May 2012, together with
D14: Product sheet "Goma Guar" from Cargill;

D15: Product sheet "Edicol® ULV-500" from Lucid Colloids Ltd.;

D16: Product sheet "Edicol® 70-70" from Lucid Colloids Ltd.; and

D17: Experimental report dated 10 May 2012.

VIII. On 12 August 2013, the parties were summoned to oral proceedings scheduled to take place on 30 April 2014. In its preliminary opinion annexed to the summons, the board stated that the viscosity obtained for a specific composition appeared to depend on the type of measurement and the parameters applied. During the oral proceedings, it would therefore be discussed whether the skilled person would have known which method to choose in order to determine the viscosity in the patent. The patent appeared to be entirely silent in this respect. One possibility for the identification of these measurement characteristics was in principle the calibration of these characteristics with the help of the examples of the patent. However, in the present case, such a calibration did not appear to be possible, as apart from the measurement characteristics there was at least one further unspecified parameter in the examples that had an impact on viscosity, namely the type of guar gum. More particularly, guar gum was available in different viscosity grades and had a significant impact on viscosity. The viscosity of the claimed composition therefore appeared to be ambiguous. It would therefore be discussed during the oral proceedings whether this ambiguity led to insufficiency of disclosure. As set out in decision T 593/09, it had
to be analysed in this respect whether, to achieve the objective of the patent in suit, the viscosity had to be as required by claim 1.

IX. With letter of 16 August 2013, the appellant requested that the oral proceedings be rescheduled, since 30 April 2014 was in the middle of a Dutch holiday. By its communication of 24 September 2013, the board refused this request, since the alleged reason for postponement was not one of those mentioned in the notice of the Vice-President of Directorate-General 3 of the European Patent Office dated 16 July 2007 (published in OJ 2007, Special Edition No. 3, page 115).

X. With its letter of 28 March 2014, the appellant filed

D18: Declaration of P. Sanders, dated 27 March 2014;

D19: Declaration of K. Brunt, dated 27 March 2014;

D20: Invoice from Eurofins for preparing D13;

D21: Declaration of A. Knoch, dated 27 March 2014; and

D22: Invoice from DIL for preparing D12.

In its letter, the appellant announced that Ms Boekema would speak during the oral proceedings, if required, on scientific issues under the direct supervision of the professional representative.

XI. With its letter of 14 April 2014, the respondent requested that D18, D19 and D21 not be admitted into the proceedings and that no oral submissions from Ms Boekema be admitted, since her personal details and
qualifications, and the subject-matter of her oral submissions, had not been indicated.

XII. On 30 April 2014, oral proceedings were held before the board. During the oral proceedings, the appellant no longer relied on D18, D19 and D21, and Ms Boekema was not present. Accordingly, the respondent did not maintain its corresponding requests filed in its letter of 14 April 2014.

XIII. The appellant's arguments, in so far as relevant to the present decision, can be summarised as follows:

The patent referred to a coating composition which after extrusion or co-extrusion was sufficiently robust and stable. To achieve this purpose, the viscosity played an important role. It was true that the patent did not identify the method to determine the viscosity and that the measured values depended on the method used and the parameters applied during the measurement. However, this at most led to a lack of clarity. As set out in decision T 593/09, lack of clarity of a parametric value was not enough for insufficiency of disclosure. In fact, in a case similar to the present one, namely T 882/03, where the claim likewise contained a viscosity parameter, the board had acknowledged sufficiency of disclosure even though the viscosity was ambiguous. Also in T 492/92, a number of methods existed for a claimed parameter and still sufficiency of disclosure was acknowledged. Therefore, sufficiency should be acknowledged in the present case as well.

Moreover, in the present case the skilled person was able to identify the method and parameters to use in order to determine the required viscosity. All that the
skilled person needed to do was to calibrate the measurement characteristics on the basis of the examples of the patent. More specifically, the skilled person simply needed to prepare the compositions of these examples and then to "tune" the measurement parameters until the viscosity values reported in these examples were obtained. This was demonstrated by D12 and D13, where two independent test institutes had reworked the examples of the patent and, by tuning the measurement frequency, had been able to reproduce the viscosity values of these examples. The measurement method thus found could be used to check whether the viscosity of any other given coating composition was as required in claim 1.

Contrary to the respondent's argument, the skilled person would have known which type of guar gum to use when reworking the examples for the above calibration. It was clear from the patent that a guar gum had to be used which increased the viscosity of the alginate. This was confirmed by E6, according to which the industrial use of galactomannans was primarily the result of their ability to produce highly viscous aqueous solutions due to the entanglement of the polymeric chains. Such entanglement was not present in low molecular weight guar gum. Therefore, the skilled person would choose a standard guar gum which, as evidenced by D14, had a viscosity between 3000 and 5000 cps. The skilled person would thus know which type of guar gum to use when reworking the examples and therefore would be able to calibrate the measurement method for the viscosity with the help of these examples. As regards D17 and the argument that the viscosity of the coating compositions varied depending on which of the viscosity grades of the standard guar gum was chosen, the appellant's expert Mr Knoch stated
that he had doubts about the correctness of the values obtained in D17 since no details were given in D17 as to how the experiments had been carried out.

In a second line of argument, the appellant took the view that the viscosity was in fact not relevant. All that was needed to carry out the invention was to select the preferred galactomannan, namely guar gum, in the amounts indicated in the description of the patent. For instance, the skilled person simply needed to repeat the examples of the patent and choose a standard guar gum with a viscosity of 5000 cps. Hence, in order to carry out the invention, the skilled person did not need to know how to determine the viscosity. In fact the viscosity had only been included in claim 1 to determine later on whether a given composition infringed the patent or not.

XIV. The respondent's arguments, in as far as relevant to the present decision, can be summarised as follows:

The present case was similar to that underlying T 593/09. As set out in this decision, in a first step the problem to be solved by the patent had to be identified. This was the provision of a robust and stable coating that did not ripple or crack. In a second step, the relevance of the viscosity to the solution to this problem had to be analysed. As acknowledged by the proprietor and as stated in paragraph [0004] of the patent, the viscosity had to be neither too high nor too low and it was thus important that the viscosity was correctly chosen to solve the problem. In a third step it had to be analysed whether the ambiguity of the viscosity led to insufficiency of disclosure. In this respect, D12 and D13 could not prove that the skilled person was able to determine a
suitable method for measuring the viscosity. More specifically, the skilled person in the technical field of the patent was a meat technologist rather than an analytical scientist specialised in the determination of viscosity like the authors of D12 and D13. These two test reports were not relevant for the further reason that the examples of the patent had not been reworked therein. More specifically, many guar gums were available and the patent, in particular the examples, did not specify which one was used. Consequently it was not possible to tell whether the guar gum of the examples was used in D12 and D13, and a calibration as applied in D12 and D13 was thus not possible. In this respect, the appellant's assertion that the skilled person would use standard guar gum in the examples was unfounded. Firstly, nowhere did the patent say that this type of guar gum had to be used. Secondly, also standard guar gum was available in different viscosity grades, as evidenced by D14, and D17 showed that the viscosity of a coating composition strongly depended on the viscosity of the guar gum contained therein. In this respect, the statements of the appellant's expert Mr Knoch about the validity of the results in D17 should be disregarded since they had been made too late. Also unconvincing was the appellant's argument that the viscosity was not relevant. Without knowing the viscosity, the skilled person would need to check whether each and every composition was a suitable coating composition, and this amounted to trial and error such that the patent was nothing more than an invitation to perform a research programme.

XV. The appellant requested that the decision under appeal be set aside and that the patent be maintained with the claims as granted.
XVI. The respondent requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.

2. Sufficiency of disclosure (Article 100(b) EPC)

2.1 Claim 1 is directed to a composition for coating foodstuffs which comprises a galactomannan, such as guar gum, and 2 to 7 wt% of alginate, and has a viscosity of 80-110 Pas at a temperature of 20°C (for the exact wording of claim 1, see point IV above).

According to the respondent, the viscosity parameter in claim 1 is ambiguous since the patent does not give the method for identifying it, and this ambiguity means that the invention underlying the patent is insufficiently disclosed.

2.2 The present case is similar to the one underlying decision T 593/09 (not published in OJ EPO), in which sufficiency of disclosure had likewise to be decided in relation to a parameter ("LTC temperature") for which the measurement method was not sufficiently defined in the patent. As set out in this decision (catchword and point 4.1.4 of the Reasons), the ambiguity of a parameter in a claim is not, by itself, a reason to deny sufficiency of disclosure. What is decisive for establishing insufficiency within the meaning of Article 83 EPC is whether the parameter, in the specific case, is so ill-defined that the skilled person is not able, on the basis of the disclosure as a whole and using his common general knowledge, to identify without undue burden the technical measures necessary to solve the problem underlying the patent.
As set out in this decision, in order to find out whether this condition for insufficiency of disclosure is met, a four-step approach can be applied. Firstly, the problem to be solved by the invention in the patent is identified (point 2.1 of the Reasons), secondly the relevance of the attacked parameter for solving this problem is determined (point 2.2 of the Reasons), thirdly it is analysed whether the parameter in the claim is indeed ambiguous (points 3.1 to 3.5 of the Reasons) and fourthly, if the parameter is ambiguous, it is determined whether due to this ambiguity and the relevance of the parameter for solving the problem, sufficiency of disclosure has to be denied (points 3.6 and 3.7 of the Reasons). This four-step approach will be applied in the present case as well (points 2.3 to 2.6 below).

2.3 The opposed patent relates to compositions for coating foodstuffs (paragraph [0001]). The objective of the invention underlying the patent is the provision of a coating composition with which a sufficiently robust and stable coating can be formed using the extrusion or co-extrusion techniques that are commonly used in the food industry (paragraph [0013]).

2.4 As set out in paragraph [0004], the rheological properties, and especially the viscosity, of the coating composition play a major role in achieving the objective of the opposed patent. If the viscosity is too low, the composition deliquesces before it can be gelled, so that no cohesive coating can be formed. Too high a viscosity can lead to problems in extrusion and to undesirable ripping of the coating. To achieve this objective, the coating composition must have a
viscosity of 80-110 Pa·s at a temperature of 20°C (claim 1 and paragraph [0029]).

The skilled person who wants to carry out the invention, i.e. to obtain coating compositions with which a sufficiently robust and stable coating can be formed, thus needs to determine the viscosity of the coating composition in order to check whether it is within the required range.

2.5 It needs to be examined, as a next step, whether the viscosity is indeed ambiguous.

2.5.1 In this respect, it was acknowledged by the appellant that the patent does not contain any information as regards the type of measurement device or measurement parameters to determine the viscosity, that there are various measurement methods available to the skilled person and that the measured viscosity values depend on the type of measurement device and, for a given device, on the measurement parameters.

2.5.2 The appellant argued however that the skilled person was nevertheless able to find out which method and parameters to use in order to determine the required viscosity. All that the skilled person needed to do was to calibrate the measurement characteristics on the basis of the examples of the opposed patent. More specifically, the skilled person had simply to prepare the compositions of these examples and then to "tune" the measurement parameters until the viscosity values reported in these examples were obtained. The appellant in this respect referred to D12 and D13, where two independent test institutes had reworked the examples of the patent (D12: examples 1 to 4, D13: examples 1 to 3 and 5) and, by tuning the measurement frequency, had
been able to obtain the reported viscosity values. The measurement method thus found could be used to check whether the viscosity of any other given coating composition was as required in claim 1. By doing so, compositions suitable to provide robust and stable coatings could be obtained.

Firstly, however, it is nowhere shown in D12 or D13 that the compositions prepared therein are indeed suitable to prepare robust and stable coatings. In fact, it is explicitly stated by the authors of D12 that "[F]urther work described in the patent concerning the application of the gels to be used as a coating of sausages was not part of the investigations [of D12]."

Secondly, it was necessary in the tests reported in D12 and D13 to experiment with various measurement devices that are typical for university departments specialised in viscosity measurement and only a sophisticated multi-step analysis in the end led to viscosity values that were at least close to those in the examples. Such a calibration could thus only be done by a person specialised in the field of viscosity measurement. The patent is however not directed at an analytical scientist specialised in viscosity measurement but to food technologists (paragraph [0001]: "The invention relates to a composition for coating foodstuffs..."). Hence, the skilled person in the art relevant to the patent would not be able to use the calibration techniques applied in D12 or D13.

Thirdly, in fact a calibration of the viscosity measurement is, as a matter of principle, not possible on the basis of the examples of the patent. Such a calibration presupposes that the measurement parameters are the only variables in the examples that determine
the viscosity. As will be shown in the following, this condition is not met:

All examples of the patent use guar gum without specifying the type of guar gum. As evidenced by D14, D15 and D16, different guar gums are available. As shown in D17 (table on last page), the viscosity of the compositions used in the examples depend on the type of guar gum. More specifically, in D17, the viscosities of three mixtures each containing a different guar gum are determined, namely containing (i) alginate and Guar HV (a guar gum having a viscosity of 6500 ctp) (test 1), (ii) alginate and Guar standard (3500 ctp) (test 2) and (iii) alginate and depolymerised Guar (50 ctp) (test 3). The viscosity of these mixtures was 1360 Pas for mixture (i), 497.5 Pas for mixture (ii) and 185.6 Pas for mixture (iii), and thus depends on the type of guar gum used. Consequently, the fact that the authors of D12 and D13 were able to tune the measurement method such that the viscosities reported in the corresponding examples were obtained does not mean that it is this method that is to be used according to the patent. On the contrary, it could equally be a different method, if a different guar gum was used in the examples.

For these reasons, the appellant's argument that the measurement method for the determination of the viscosity can be calibrated and thus identified on the basis of the examples of the patent must fail.

2.5.3 As regards the dependence of the viscosity on the type of guar gum shown in D17, the appellant's expert Mr Knoch argued that he had doubts about the correctness of these values, since no details were given in D17 about how the experiments had been carried
out. This submission can however not be taken into account in view of the fact that it was made at the latest possible time during the appeal proceedings, while the report had already been available for two years and furthermore since the doubts raised by the expert were not substantiated. Irrespective of this, even if there were some doubt about the absolute values reported in D17, this test report shows at least qualitatively a dependence of the viscosity on the type of guar gum.

2.5.4 The appellant also argued that the skilled person would use a standard guard gum in the examples of the patent and that this standard guar gum had a viscosity between 3000 and 5000 cps, as evidenced by D14. The skilled person would thus know which type of guar gum to use and therefore would be able to calibrate the viscosity measurement method on the basis of the examples.

The board does not find this argument convincing. First of all, nowhere does the patent indicate that indeed standard guar gum is used in the examples. Secondly, even if, in the appellant's favour, it is assumed that the skilled person reading the examples of the patent would indeed use standard guar gum, it would still not be possible to use the examples to calibrate the viscosity measurement method. More specifically, as acknowledged by the appellant, standard guar gum is available within a viscosity range of 3000 to 5000 cps. Thus, the type of the guar gum would still be a variable in the examples that would affect the viscosity of the resulting coating composition.

2.5.5 Consequently, on the basis of the patent and his common general knowledge, the skilled person is unable to identify the measurement method by which the viscosity
values required by claim 1 have to be determined. In view of the fact that the values depend on the type of measurement method and parameters, the skilled person cannot tell whether or not a given composition has a viscosity as required by claim 1. The viscosity in claim 1 is thus ambiguous.

2.6 In view of its ambiguity, the viscosity is not available as a selection criterion to identify suitable coating compositions that solve the problem underlying the opposed patent. The skilled person therefore has to identify suitable compositions by trial and error. Hence, the patent is nothing more than an invitation to perform a research programme.

2.6.1 While the appellant during the oral proceedings initially acknowledged that the viscosity as required by claim 1 was indeed essential to solve the problem underlying the patent, it later on presented a second line of argument starting from the assumption that the viscosity was in fact not relevant. According to this line of argument, all that was needed to carry out the invention was to select the preferred galactomannan, namely guar gum, in the amounts indicated in the description of the patent. For instance, the skilled person simply needed to repeat the examples of the opposed patent and choose a standard guar gum to obtain a suitable coating composition. Hence, in order to carry out the invention the skilled person did not need to know how to determine the viscosity. In fact the viscosity had only been included in claim 1 to determine later on whether a given composition infringed the patent or not.

2.6.2 The board does not find this argument acceptable. The proprietor is not free to choose a particular approach
when drafting the patent and when arguing its case, and then to change it later on when it realises that this approach might fail. So if the proprietor (and in the present case appellant) chooses to include a statement when drafting the patent that, in order to solve the problem underlying the patent, the coating composition must have a certain viscosity, then normally it cannot argue, later on in the proceedings, that in fact the viscosity does not matter.

Furthermore, even if one accepts the appellant's argument, the patent does not teach the skilled person how to obtain a suitable coating for any composition different from those of the examples, for instance a composition containing a galactomannan different from guar gum. Since, due to its ambiguity, the viscosity is not available as a selection criterion to identify suitable components and amounts for these different compositions, the conclusion remains valid that the skilled person has to rely on trial and error such that the patent is nothing more than an invitation to perform a research programme.

2.7 During the oral proceedings, the appellant referred to decision T 882/03 and argued that, in the case underlying that decision, the claim had referred to a certain intrinsic viscosity for the determination of which two methods were available. This situation was thus comparable to the present case. Nevertheless the board in that case acknowledged sufficiency, arguing that there were only some doubts about the limits of the claim and this referred more to the reliability of the method rather than preventing the skilled person from carrying out the invention. Therefore, in line with the decision in that case, sufficiency of
disclosure should also be acknowledged in the present case.

The present board acknowledges that an ambiguity of a parameter in the claim is not enough itself to deny sufficiency of disclosure (see point 2.2 above). However, whether such an ambiguity leads to insufficiency of disclosure is to be decided on a case-by-case basis (see "in the specific case" in the catchword and second paragraph of point 4.1.4 of the Reasons of T 593/09). In T 882/03 (points 2.5 and 2.6), the variations resulting from the ambiguity of the intrinsic viscosity were only minor and the board in that case therefore considered this ambiguity not to be such that sufficiency of disclosure had to be denied. In the present case, the variation of viscosity is by orders of magnitude, depending on which measurement frequency is used. For instance, the viscosity changes from values above 1000 Pas to values below 100 Pas if the measurement frequency is increased from 0.1 to 10 Hz (see figures 4 to 8 of D12). Hence, taking into account that the viscosity range in claim 1 only extends from 80 to 110 Pas, the variation in the present case is certainly not minor. The conclusion in T 882/03 thus clearly does not apply to the present case.

The appellants furthermore cited decision T 492/92 (not published in OJ EPO) and argued that also in the case underlying this decision a parameter was present in the claim that could be determined by two different methods and still sufficiency of disclosure was acknowledged. However, in that case, the board stated that if the skilled person was interested in the best possible accuracy of the results, he would know which method to choose (penultimate sentence of point 3.3 of the
Reasons). This is different from the present case where, as set out above, the method and the measurement parameters to be chosen are not known to the skilled person.

2.8 The invention underlying claim 1 is thus insufficiently disclosed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Cañuelo Carbajo W. Sieber

Decision electronically authenticated