BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [ ] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 24 April 2012

Case Number: T 0695/10 - 3.3.09

Application Number: 02741725.2

Publication Number: 1395133

IPC: A23L 1/308, A23L 1/29

Language of the proceedings: EN

Title of invention:
Polymer controlled induced viscosity fiber system and uses thereof

Patentee:
ABBOTT LABORATORIES

Opponent:
N.V. Nutricia

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 83

Keyword:
"Interpretation of the claims"
"Sufficiency of disclosure (yes)"
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

This datasheet is not part of the Decision.
It can be changed at any time and without notice.

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0695/10 **-** 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 24 April 2012

Appellant I: (Patent Proprietor)
ABBOTT LABORATORIES
CHAD 0377/AP6D-2
100 Abbott Park Road
Abbott Park IL 60064-3500 (US)

Representative:
Modiano, Micaela Nadia
Modiano Josif Pisanty & Staub Ltd
Thierschstrasse 11
D-80538 München (DE)

Appellant II: (Opponent)
N.V. Nutricia
Eerste Stationsstraat 186
NL-2712 HM Zoetermeer (NL)

Representative:
van Westenbrugge, Andries
Nederlandsch Octooibureau
Postbus 29720
NL-2502 LS Den Haag (NL)

Decision under appeal:
Interlocutory decision of the Opposition Division of the European Patent Office posted 20 January 2010 concerning maintenance of European patent No. 1395133 in amended form (Articles 101(3)(a) and 106(2) EPC).

Composition of the Board:

Chairman: W. Sieber
Members: N. Perakis
R. Menapace

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 1 395 133 in the name of Abbott Laboratories, which had been filed as international application No. PCT/US2002/016413 on 23 May 2002, was published on 12 April 2006 (Bulletin 2006/15). The patent was granted with 10 claims, independent claims 1 and 7 reading as follows:

"1. A polymer controlled induced viscosity fiber system comprising:
a. a satiating amount of a neutral soluble fiber source selected from the group consisting of guar gum, pectin, locust bean gum, methylcellulose, β-glucans, and mixtures thereof, and
b. sufficient quantity of lightly hydrolyzed starch, said lightly hydrolyzed starch having a DP value in the range of from 20 to 100."

"7. Use of the polymer controlled viscosity fiber system according to claim 1 for manufacturing a preparation for blunting the postprandial glycemic response of a diabetic patient by administration to said diabetic patient of a sufficient quantity."

Claims 2 to 6 and 8 to 10 were dependent claims.

II. An opposition was filed by N.V. Nutricia requesting revocation of the patent in its entirety on the grounds of Article 100(a) EPC (lack of novelty and inventive step) and Article 100(b) EPC (insufficiency of disclosure).

Together with the notice of opposition, the opponent filed ***inter alia*** the following documents:

D2: US 5 470 839 A;
D3: EP 0 898 900 A2;
D7: Ya-Jane Wang ***et al***, "Structures and Properties of Commercial Maltodextrins from Corn, Potato, and Rice Starches, ***Starch/Stärke***, 52 (2000), 296-304;
and
D8: W0 00/67592 A1.

III. By its interlocutory decision announced orally at the oral proceedings of 25 November 2009 and issued in writing on 20 January 2010, the opposition division maintained the European patent in amended form with claims 1-9 according to auxiliary request II filed with letter of 20 November 2009.

IV. Both the patent proprietor and the opponent appealed against the interlocutory decision of the opposition division. The appellants will be referred to below simply as patent proprietor and opponent.

V. The patent proprietor filed its appeal on 30 March 2010 and paid the appeal fee on the same day. The statement setting out the grounds of appeal was filed on 24 May 2010.

The patent proprietor requested that the decision of the opposition division be set aside and that the patent be upheld in accordance with auxiliary request I, which had been rejected by the opposition division on the ground that its subject-matter lacked novelty in view of the disclosure of document D8.

VI. The opponent filed its appeal on 19 March 2010 and paid the appeal fee on the same day. The statement setting out the grounds of appeal was filed on 27 May 2010.

The opponent requested that the appealed decision be set aside and that the European patent be revoked in its entirety.

VII. With a letter dated 24 February 2012, the patent proprietor filed a main request and seven auxiliary requests. Claim 1 of the main request reads as follows:

"1. A polymer controlled induced viscosity fiber system comprising:
a. a satiating amount of a neutral soluble fiber source selected from the group consisting of guar gum, locust bean gum, methylcellulose, β-glucans, and mixtures thereof, and
b. sufficient quantity of lightly hydrolyzed starch, said lightly hydrolyzed starch having a DP value in the range of from 20 to 100, wherein said neutral soluble fiber and lightly hydrolyzed starch are in a ratio of from 0.35:5 to 1:5."

Apart from the deletion of pectin from the group of the neutral soluble fibre source, this claim corresponded to claim 1 of auxiliary request I rejected by the opposition division.

VIII. Oral proceedings before the board were held on 24 April 2012. During these proceedings the patent proprietor withdrew all previously filed auxiliary requests. It

also filed a description adapted to the claims of the main request.

IX. The relevant arguments put forward by the patent proprietor in its written submissions and during the oral proceedings may be summarised as follows:

- The claimed invention was disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. There was no contradiction between the claimed fibre system and that disclosed in D8 (example 3). The expression "a polymer controlled induced viscosity fiber system" corresponded to a functional feature of the claimed fibre system (fibre composition) which distinguished it from the fibre system of D8. The functional feature of the claimed fibre system depended both on the amount and the polymerisation degree of the lightly hydrolysed starch, as shown in figure 1 of the patent in suit. Both requirements were responsible for the viscosity change of the neutral soluble fibre source in the claimed fibre system.

- The claimed fibre system was novel over D8 which did not concern a fibre system with the claimed functional feature.

- It was also novel over D2 (column 6, example) which did not disclose the polymerisation degree of maltodextrin (corresponding to the lightly hydrolysed starch of the claimed fibre system). This polymerisation degree was also not implicit in D2 as had been alleged by the opponent on the basis of the disclosure of D7. On the one hand the opponent had

wrongly assessed D2 and D7 and secondly he had combined two documents, D2 with D7, which was not allowed for assessing novelty.

- The claimed fibre system was not obvious in view of the cited state of the art. The arguments of the opponent were based on hindsight. The skilled person starting from D3, considered as the closest state of the art, and looking for an alternative fibre system, would not consider example 3 of D8 because it clearly and unambiguously stated that maltodextrin (the lightly hydrolysed starch of the claimed subject-matter) did not reduce the viscosity of guar gum (one of the specific neutral soluble fibre sources of the claimed subject-matter).
  Therefore he would not be motivated to modify the guar gum/maltodextrin ratio of D3 and use the ratio disclosed by D8. Moreover, the skilled person would not be motivated to modify this ratio at all, since D3's disclosure essentially concerned the polysaccharide inulin, which was indigestible and which was decomposed by lactic acid bacteria in the lower digestive tract. Unlike inulin, maltodextrin was a digestible polysaccharide which was decomposed by α-amylase in the stomach and upper digestive tract of a human.

- Even if the skilled person started from D8 as the closest state of the art and looked for an alternative fibre system, he would not find any motivation in this document or the other cited prior art to investigate the system guar gum/maltodextrin disclosed in D8 any further. D8 clearly stated that the use of maltodextrin in this system did not

reduce the viscosity of guar gum. In view of this disclosure the skilled person would not expect that the decomposition of maltodextrin under the action of α-amylase in the upper digestive tract would increase the guar gum viscosity.

X. The relevant arguments put forward by the opponent in its written submissions and during the oral proceedings may be summarised as follows:

- The expression "a polymer controlled induced viscosity fibre system" as used in claim 1 merely meant "a fiber composition" which comprised the two components a) and b). No other definition could be given to this unclear expression in the assessment of sufficiency of disclosure and novelty of the claimed invention.

- Document D8 (example 3) disclosed a fibre system comprising guar gum and maltodextrin, these constituents falling within the definition of the constituents of claim 1 of the main request. In view of the disclosed concentration of these constituents their ratio fell also within the claimed range. However, D8 clearly disclosed that maltodextrin did not decrease the viscosity of guar gum, contrary to what was disclosed in the patent in suit (see paragraph [0029]). The patent in suit did not explain why the viscosity of guar gum was reduced in the claimed fibre system and did not provide the skilled person with the necessary technical information in order to reduce guar gum's viscosity. Under these circumstances the claimed invention was

not sufficiently disclosed for it to be carried out by a skilled person in the art.

- On the basis of the disclosure of D8 (example 1) the fibre system of claim 1 lacked novelty, as the expression "a polymer controlled induced viscosity fiber system" did not define a differentiating feature.

- The fibre system of this claim lacked novelty also in view of the disclosure of D2 (example). Although D2 did not disclose the degree of polymerisation (DP) of the maltodextrin used in the example, D7 disclosed that all commercial maltodextrins had a DP in the claimed range of 20-100. Thus in view of D7 the disclosure of D2 was novelty-destroying for the claimed composition. The opponent did not combine the disclosure of D7 with that of D2; it simply used the disclosure of D7 as technical information in order to explain the disclosure of D2.

- The subject-matter of claim 1 lacked an inventive step in view of the obvious combination of D3 with D8, or in view of the disclosure of D8 considered alone, or in view of the obvious combination of D8 with D3.

- Considering D3 as the closest state of the art, the claimed fibre system differed from that of D3 (example 1, paragraphs [0019], [0022] of the description and claim 8) only as regards the ratio of the soluble fibre to the lightly hydrolysed starch. The skilled person looking for a fibre system alternative to that of D3 would find it

obvious to modify the known fibre system by using the ratio disclosed in D8 (example 3) and would arrive at the claimed composition without needing to exercise any inventive activity.

– Considering D8 as the closest state of the art, the skilled person looking for a fibre system comprising guar gum and maltodextrin with a maltodextrin which would reduce the viscosity of guar gum would find in this document (see the figures) the incentive to further investigate the disclosed but unsuccessful fibre system and would arrive at the amount of maltodextrin sufficient to obtain the functional feature of the claimed fibre system ("a polymer controlled induced viscosity fiber system") without needing to exercise any inventive activity.

XI. The appellant (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained on the basis of claims 1-8 filed as main request with letter dated 24 February 2012, the amended description filed during the oral proceedings, and the drawings (figures 1-6) of the patent as granted.

XII. The appellant (opponent) requested that the decision be set aside and that European patent No. 1 395 133 be revoked.

Reasons for the Decision

1. The appeals are admissible.

2. Interpretation of claim 1

2.1 The subject-matter of independent claim 1 relates to "a polymer controlled induced viscosity fiber system" which comprises two components (a) and (b), in a specific ratio.

The board agrees with the opponent that the expression "a polymer controlled induced viscosity fiber system" is not an established expression in the art relating to dietary fibres and meal replacement products.

2.2 Certainly this expression concerns a composition (called "a fiber system") whose structural definition is given in the contested claim by specifying the chemical nature of its compulsory components:

- component (a) is a neutral soluble fibre source selected from the group consisting of guar gum, locust gum, methylcellulose, β-glucans, and mixtures thereof, and
- component (b) is a lightly hydrolysed starch with a DP value in the range of from 20 to 100.

2.3 The fibre system is further defined by the relative amounts of these fibres, i.e. a satiating amount of the neutral soluble fibre and a sufficient quantity of the lightly hydrolysed starch (although both "satiating amount" and "sufficient quantity" are rather vague terms), and their ratio which ranges from 0.35:5 to 1:5.

2.4 Thus the objection of the opponent boils down to the determination of the significance of the remaining part of the contested expression, namely the "polymer controlled induced viscosity" and its relationship

(qualitative and quantitative) to the constituents of the fibre system.

2.5 The board accepts that this expression is not clear. However, lack of clarity is not a ground for opposition and since the expression has always been present in claim 1 as granted claim 1 of the present main request cannot be objected to for lack of clarity. Therefore, in order to determine the significance of the unclear terminology, it is necessary to interpret it on the basis of the patent specification.

As stated in paragraph [0028] of the patent specification, the patent addresses the persisting need in the art for fibre systems that, upon ingestion by a mammal, induce a feeling of fullness and satiety, while also being well tolerated, organoleptically acceptable and easily incorporated into nutritional matrices.

Paragraph [0029] points out that the inventors have discovered a fibre system that facilitates the incorporation of soluble, viscous fibres into a nutritional product. The fibre system is clinically effective in blunting the glycemic response to a meal, yet without bringing about the negative organoleptic, tolerance and stability issues typically associated with the use of soluble viscous fibres in nutritional products.

In order to achieve the desired result, the fibre system comprises - in addition to a neutral soluble fibre - lightly hydrolysed starch with a DP value in a range of from 20 to 100, preventing the dissolution of the neutral soluble fibre such that the said product

has a low viscosity before intake. Only when the lightly hydrolysed starch component is hydrolysed upon intake ***in vivo*** by α-amylase, is the neutral soluble fibre allowed to solubilise and swell, thus bringing about a viscous digesta. In such a way, the chain length of the lightly hydrolysed starch (polymer component) controls the viscosity generated by the soluble fibre from low to high. In other words, the fibre system is polymer controlled, namely by the lightly hydrolysed starch.

2.6 In view of these technical explanations provided in the patent in suit, the only sensible interpretation of the contested expression is that:

- the polymer fibre system controls the viscosity, in the sense that viscosity is kept low by not allowing the dissolution of the soluble viscous fibres (component (a)), and

- the polymer fibre system has an induced viscosity, in the sense that ***in vivo*** the viscosity increases through the hydrolysis of the lightly hydrolysed starch by the action of α-amylase (component (b)).

The "unclear" expression corresponds therefore to **a functional feature**. In order to achieve the effects of this functional feature, namely a low viscosity of the fibre system initially and "satiety" as a result of the ***in vivo*** induction (i.e. increase) of the viscosity, claim 1 requires that component (b) must be present in a sufficient quantity and component (a) in a satiating amount.

2.7 This interpretation of the "polymer controlled induced viscosity fiber system" is confirmed by figure 1 of the patent in suit. This figure shows that when the quantity of the component (b) is not sufficient, e.g. when a maltodextrin at a concentration of 5% or less having a DP value of 25 is added to a 2% guar gum solution, no sensible modification of the guar gum viscosity is observed. Only at higher maltodextrin concentrations is the guar gum viscosity dramatically reduced.

Figure 1 also confirms what the patent specification states in paragraph [0030], last sentence, namely that the concentration of maltodextrin (hydrolysed starch) which is required to prevent the neutral soluble fibre from dissolving is inversely proportional to the molecular weight of the starch. Thus figure 1 illustrates that the addition of maltodextrin having a DP value of 100 (higher molecular weight) reduces the viscosity of a 2% guar gum solution at very low concentrations, e.g. around 1%.

Under these circumstances, a maltodextrin with a DP value of 20 (i.e. lower than the exemplified DP value of 25) will be expected to reduce the viscosity of the 2% guar gum solution at concentrations higher than 10%, i.e. higher than the concentration of the exemplified maltodextrin with a DP value of 25.

3. Sufficiency of disclosure

3.1 The opponent contested the sufficiency of disclosure on the basis of an alleged "technical contradiction" between the patent in suit and example 3 of D8. This

example discloses an aqueous mixture comprising 1% guar gum (a neutral fibre according to claim 1) and 10% DE5 maltodextrin (which the parties argued to be a maltodextrin having a degree of polymerisation of about 20). It is stated in example 3 of D8 "that maltodextrin does not decrease the viscosity of the guar gum dispersions".

Thus although the two components of claim 1 were used, the system did not produce the desired (and claimed) effect. According to the opponent, this leads to an insufficiency objection as the skilled reader is unable to determine either what "a polymer controlled induced viscosity fibre system" is or what the difference is with the prior art system described in D8, or both.

3.2 The board observes that no technical contradiction exists between the patent in suit and D8 for the following reasons:

Regarding the disclosure of D8, the fibre system of example 3 comprises a maltodextrin having a DP value of about 20. This maltodextrin at the specified concentration of 10% does not decrease the viscosity of a 1% solution of guar gum, because it does not satisfy the requirement of "sufficient quantity" of component (b) of the contested claim (see the technical explanations of the patent in suit (paragraphs [0029] and [0030]; figure 1). As already indicated in relation to figure 1 of the patent in suit, when the concentration of a maltodextrin with a DP value of 25 does not exceed 5%, its addition to a 2% guar gum solution does not change the viscosity of the latter.

Only when the maltodextrin concentration is higher can the viscosity be decreased.

The obvious conclusion from the above is that the maltodextrin of example 3 of D8, which has a DP value of about 20, at a concentration of 10% is not sufficient to decrease the viscosity of a 1% guar gum dispersion and that a higher concentration would be necessary to obtain this result. At the concentration used in example 3 of D8 the mixture is not a polymer controlled induced viscosity fibre system.

3.3 On the basis of these considerations, the board concludes that the invention is disclosed in a manner sufficiently clear and complete for it to be carried out by the person skilled in the art.

4. **Novelty**

During oral proceedings before the board the opponent contested the novelty of the subject-matter of claim 1 in view of the disclosure of documents D8 and D2. The objection based on D3 was dropped.

4.1 With regard to D8 the only relevant disclosure is example 3, which is a comparative example. In this context the board makes reference to point 3.2 *supra*, where the content of the disclosure of D8 is assessed, and to the conclusion drawn that the fibre system of example 3 of D8 does not fulfil the functional requirement of a polymer controlled induced viscosity fibre system. D8 explicitly states that the maltodextrin having a DE value of 5, corresponding to a DP value of 20, at a concentration of 10% does not

reduce the viscosity of a 1% guar gum dispersion. Thus by not fulfilling the functional requirement of the claimed subject-matter, the disclosure of D8 differs from it and is irrelevant for novelty.

4.2 Regarding D2 (example, table on column 6), this document discloses a fibre system which comprises guar gum (a soluble fibre within the definition of component (a) of claim 1) and maltodextrin (comparable to component (b) of claim 1) in a ratio 0.5:5. Nevertheless, the example of D2 does not disclose the DP value of the maltodextrin used and does not contain any information which could imply a DP value, such as the trade name or the manufacturer of maltodextrin. Consequently the skilled reader cannot directly and unambiguously derive from D2 that the disclosed maltodextrin falls within the definition of component (b) of the claimed fibre system.

4.3 As regards the DP value of the maltodextrin used in D2 the opponent referred to D7 (the left peak on the chromatograms of figures 1 and 2) and argued that this document disclosed commercial maltodextrins with a DP value around 100 which the skilled person would consider as the maltodextrins used in the example of D2. Notwithstanding the correctness of the assessment of the disclosure of D7 by the opponent, D2 does not specify that these commercially available maltodextrins have been used. Since, as set out above, D2 does not disclose the origin of the maltodextrin used, the skilled person would not use D7 in order to interpret D2. Therefore D2 is likewise not novelty-destroying for the subject-matter of claim 1.

4.4 As regards the objection based on D3 raised in the written submissions only, the board agrees with the patent proprietor that the opponent has read certain preferred features contained in the specification of D3 into the table displayed in example 1. Apart from that, the guar gum maltodextrin ratio is also outside the scope of claim 1, as pointed out by the patent proprietor.

4.5 As independent product claim 1 is novel, all dependent product claims 2-5, which correspond to specific embodiments of claim 1, are also novel. Concerning the subject-matter of claims 6-8, which corresponds to a medical use of the product of claim 1 drafted in the format of a Swiss-type claim, it also meets the requirement of novelty.

5. **Inventive step**

5.1 The closest state of the art

5.1.1 The patent in suit (see paragraphs [0029] to [0031]) concerns a fibre system that facilitates the incorporation of soluble, viscous fibres into a liquid product which, fed to a diabetic patent in a sufficient quantity, becomes clinically effective in blunting the patient's postprandial glycemic response.

The fibre system comprises a satiating amount of a neutral (viscous) soluble fibre source and a sufficient quantity of lightly hydrolysed starch. The lightly hydrolysed starch prevents the dissolution of the neutral soluble (viscous) fibre source and keeps the viscosity of the fibre system low. By doing so, the

slimy mouth-feel, tooth packing and poor palatability of the viscous fibres are reduced and the hedonic quality of the fibre system is improved (patent in suit, paragraphs [0008] and [0020]). Once the fibre system has been swallowed, the lightly hydrolysed starch is hydrolysed by α-amylase, thus enabling the neutral (viscous) soluble fibre to solubilise and form a viscous digesta in the stomach, thereby slowing the release of nutrients to the small intestine and blunting the postprandial glycemic response of a diabetic patient fed with the fibre system (patent in suit, paragraph [0020]).

5.1.2 D8 (abstract; page 2, line 22 to page 3, line 12; page 3, line 25 to page 4, line 11; page 10, line 20 to page 13, line 25) discloses a similar fibre system with the same effects. Its specific disclosure concerns low viscosity glucomannan compositions (e.g. konjac flour) prepared by mixing a sufficient amount of a viscosity lowering compound such as a polysaccharide (e.g. maltodextrin, inulin and hydrolysed guar gum) with glucomannan under conditions suitable to form a low viscosity glucomannan composition. By administration of an effective therapeutic amount of this composition to a human, the maltodextrin is hydrolysed under the effect of α-amylase and the viscosity of the glucomannan increases. The use of konjac in the composition, known to beneficially affect lipid and glucose levels in humans such as diabetic patients, contributes therefore to the reduction of blood glucose and cholesterol.

Therefore D8 which, like the patent in suit, discloses a fibre system with an initial low viscosity which

avoids the slimy mouth-feel, tooth packing and poor palatability - which viscosity is afterwards increased in the patient's stomach, thereby slowing the release of nutrients to the small intestine and attenuating postprandial glycemic excursions (this fibre system being therefore a polymer controlled induced viscosity fibre system) - is considered to be the closest state of the art.

5.1.3 Contrary to the assertions of the opponent, D3 is less relevant than D8 and cannot be considered to represent the closest state of the art. D3 (abstract; page 2, paragraphs [0001] and [0010], page 3, paragraphs [0015], [0017] and [0022]) discloses a nutritional composition for diabetics which contains a fibre system comprising as a first component a viscous soluble fibre (e.g. guar gum, xanthan gum, arabic gum, pectin and β-glucan) and as a second component either inulin or inulin hydrolysate, which as in the fibre system of claim 1 of the main request has a low viscosity when in liquid form. Although maltodextrin may be used in the fibre system as a carbohydrate source, it is an optional component.

The chemical structure of the compulsory component inulin is different from that of maltodextrin and therefore it is not hydrolysed by α-amylase. In fact inulin is a substrate for lactic acid bacteria which are found further down the gastro-intestinal tract. Consequently, as the patent proprietor explained at the oral proceedings before the board and which was not contested by the opponent, the fibre mixture of D3, which contains inulin, the latter not being hydrolysed in the mouth by saliva or in the stomach, does not

enable the viscous fibre to solubilise and form a viscous digesta in the patient's stomach and small intestine. Thus, unlike the patent in suit and D8, D3 deals with a fibre system in which, although low viscosity is initially obtained, high viscosity is formed at a later stage in the digestive tract.

Since the fibre system of D3 does not have the same effect ***in vivo***, it is undisputedly more remote than D8 from the subject-matter of claim 1 and cannot be considered to be the most promising springboard for the assessment of inventive step.

5.2 The technical problem

5.2.1 In view of the technical problem solved by the closest state of the art, which is the same as that cited in the patent in suit, the objective technical problem solved by the subject-matter of claim 1 has to be redefined as the provision of a polymer controlled induced viscosity fibre system alternative to that of D8.

5.2.2 The set technical problem is solved by the use of a specific neutral soluble fibre in the claimed fibre system, namely a neutral soluble fibre selected from the group consisting of guar gum, locust bean gum, methylcellulose, β-glucans and mixtures thereof, whereas D8 uses glucomannan (e.g. konjac) as the neutral soluble fibre. The patent in suit contains sufficient experimental evidence which demonstrates that the technical problem is successfully solved. This was not contested by the opponent.

5.3 The question of obviousness

5.3.1 The question which remains to be answered is whether the skilled person, starting from D8 and aiming at the provision of an alternative polymer controlled induced viscosity fibre system, would find the motivation in the art to replace the glucomannan soluble (viscous) fibre with one of the soluble (viscous) fibres according to the subject-matter of claim 1.

5.3.2 The board observes that D8 does not give any hint to replace glucomannan with any of the claimed soluble fibres, such as guar gum. On the contrary, in view of the explicit disclosure of D8 (see page 8, lines 13-18, example 3 and figure 3) that "the combination of guar gum and maltodextrin did not demonstrate any significant decrease in the viscosity of the dispersion", the skilled person would not be motivated to replace glucomannan by guar gum.

5.3.3 The opponent argued that example 3 of D8 relates only to a specific dispersion of 1% guar gum and 10% of maltodextrin with a DE value of 5. However, the skilled person is taught by D8 (see figures 1 and 2) that the viscosity is a function of the concentration of maltodextrin and of its DP value. He would therefore be motivated to investigate this fibre system by exploring the influence of the concentration of maltodextrin on the viscosity of the fibre system and would arrive by carrying out some tests, without any undue burden, at the claimed concentration of maltodextrin.

The board considers that the above arguments of the opponent are based on hindsight and under these circumstances cannot be followed.

5.3.4 The board also considers that none of the other cited documents provides a hint to the skilled person to replace glucomannan in the fibre system of D8.

The opponent argued that the skilled person would find a motivation in D3 (example 1) to make such a replacement. The board is, however, not convinced that the skilled person would consider D3 at all, since the compulsory soluble fibre inulin is an indigestible polysaccharide which is not hydrolysed by the α-amylase ***in vivo*** but is decomposed under the influence of lactic acid bacteria further down the gastro-intestinal tract of a human and does not allow an increase of viscosity in the stomach. Moreover, even if the skilled person consulted D3, he would have no reason to give the maltodextrin of example 1 any particular attention since maltodextrin is an optional component of the fibre system of this document. Therefore this argument of the opponent appears also to be based on hindsight.

5.4 In conclusion the subject-matter of claim 1 is not obvious in view of the teaching of the state of the art and that it consequently involves an inventive step.

5.5 It follows therefrom, that the subject-matter of dependent claims 2-5, which corresponds to specific embodiments of claim 1, involves an inventive step ***mutatis mutandis***. Furthermore, the subject-matter of claims 6-8, which corresponds to a medical use of the

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

6. Adapted description

The patent proprietor submitted an amended description during the oral proceedings before the board. The opponent did not object to the amendments and the board is satisfied that they provide support to the subject-matter claimed in the main request, without contravening any of the requirements set by the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent as amended on the basis of:
   - claims 1-8 filed as main request with letter dated 24 February 2012;
   - description pages 2-16 filed during the oral proceedings before the board;
   - drawings (figures 1-6) of the patent as granted.

The Registrar: The Chairman:

G. Röhn W. Sieber