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**Datasheet for the decision  
of 20 September 2024**

**Case Number:** T 2029/22 - 3.3.09

**Application Number:** 15798651.4

**Publication Number:** 3217803

**IPC:** A23D7/005, A23L2/06, A23L2/52,  
A23L2/385, A23L2/56, A23D7/01

**Language of the proceedings:** EN

**Title of invention:**  
CLEAR BEVERAGE COMPRISING AN O/W EMULSION

**Patent Proprietor:**  
Cargill, Incorporated

**Opponent:**  
Grünecker Patent- und Rechtsanwälte PartG mbB

**Headword:**  
Clear beverage/CARGILL

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

**Keyword:**  
Main request: sufficiency of disclosure and inventive step -  
(yes)

**Decisions cited:**

T 0144/16, T 0148/10

**Catchword:**



**Beschwerdekammern**  
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Case Number: T 2029/22 - 3.3.09

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.09**  
**of 20 September 2024**

**Appellant:** Grünecker Patent- und Rechtsanwälte  
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**Representative:** Grünecker Patent- und Rechtsanwälte  
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**Respondent:** Cargill, Incorporated  
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**Representative:** Forresters IP LLP  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 9 June 2022  
rejecting the opposition filed against European  
patent No. 3217803 pursuant to Article 101(2)  
EPC.**

**Composition of the Board:**

**Chairman** A. Haderlein  
**Members:** A. Veronese  
R. Romandini

## Summary of Facts and Submissions

I. The appeal was filed by the opponent (appellant) against the opposition division's decision rejecting the opposition filed against the European patent.

II. Claims 1 and 4 of the granted patent read:

*"1. A clear beverage having a turbidity of less than 5 NTU, said beverage comprising an oil-in-water emulsion wherein the oil is an essential oil, wherein said emulsion comprises an excess of n-alkenyl succinate starch emulsifier to essential oil, wherein the n-alkenyl succinate starch is n-octenyl succinic anhydride (nOSA) starch, wherein the nOSA starch and essential oil are in a ratio of between 1.2:1 and 8:1 (wt.%) and wherein the essential oil comprises citrus oil."*

*"4. A process for manufacturing the clear beverage of anyone of the preceding claims, comprising the steps of:*

- a) Preparing a pre-emulsion having an oil phase and an aqueous phase, the pre-emulsion comprising an nOSA starch emulsifier and citrus oil, wherein the nOSA starch emulsifier is in an excess amount compared to the amount of the citrus oil;*
- b) Homogenizing the pre-emulsion to obtain said oil-in-water emulsion; and*
- c) Diluting said emulsion."*

III. With its notice of opposition, the opponent requested revocation of the patent in its entirety on the grounds under Article 100(a) (lack of inventive step) and Article 100(b) EPC.

IV. The documents submitted during the opposition proceedings included:

D1: WO 2008/039564 A1

D2: S.S. Lim et al., Food Chemistry 128, 2011, 1023-8

D3: E. Dłużewska et al., Acta Sci. Pol, Technol. Aliment. 5(2), 2006, 147-56

D4: L. Dokić et al., Food Hydrocolloids 29, 2012, 185-92

D5: B.C. Clark et al., "Acid-Catalyzed Reactions of Citrus Oils and other Terpene-Containing Flavors", Off-Flavors in Foods and Beverages, ed. G. Charalambous, Elsevier Science Publishers BV, 1992, 229-85

V. In its decision, the opposition division found, *inter-alia*, the following.

- The claimed invention was sufficiently disclosed. Relying on the teaching of the patent and common general knowledge, the skilled person would have been able to prepare the clear beverage comprising an emulsified essential oil defined in the claims. The patent showed that beverages having the claimed turbidity could be prepared. Five days after production, all beverages had that turbidity.
- The claimed subject-matter involved an inventive step over D1, the closest prior art. D1 related to, like the opposed patent, the preparation of clear beverages containing essential oils, such as citrus oil. The claimed beverage differed from those exemplified in D1 in the emulsifier - sodium octenyl succinate starch (nOSA starch) - and in its

ratio to the essential oil. There was no evidence that these distinguishing features were associated with a new effect. The problem was the provision of an alternative beverage. D1 mentioned the use of nOSA starch for producing clear beverages comprising emulsified essential oils. However, neither D1 nor D2 to D4 taught to replace the sucrose emulsifier used in the beverages exemplified in D1 with nOSA starch, let alone to use the claimed nOSA-starch-to-oil ratio.

VI. The appellant's arguments may be summarised as follows.

- A beverage having the claimed turbidity could only be prepared by conducting tests based on trial and error. This involved an undue burden. Thus, the claimed invention was not sufficiently disclosed.
- The claimed subject-matter lacked an inventive step over D1, alone or combined with D2, D3, D4 and D5.
- The claimed subject-matter differed from the teaching of D1 only in the claimed nOSA-starch-to-oil ratio. Since this ratio was not associated with any effect, the problem was the provision of an alternative clear beverage and a method for its production. Furthermore, as far as claim 4 was concerned, this problem was not solved over the whole scope because the claimed method lacked a storage step essential for obtaining the claimed turbidity.
- The prior art suggested using the claimed nOSA starch in the claimed ratio with oil. D1 taught to use nOSA starch to prepare clear emulsions. Its

disclosure was not limited to emulsions comprising oil in excess. Mention was also made to an adjustment of the nOSA-starch-to-oil ratio. In view of this teaching, the invention was obvious. Furthermore, D2 taught to increase the amount of surfactants, decrease the particle size in emulsions and stabilise those emulsions. This necessarily resulted in a decrease of their turbidity. Thus, D2 motivated the skilled person to increase the amount of nOSA starch in the compositions of D1. D3 taught that increasing the amount of oil phase in emulsions increased their opacity. This provided an incentive to decrease the amount of oil and increase that of nOSA starch. D4 taught that increasing the amount of nOSA starch in emulsions decreased the size of the particles they contained. Furthermore, it disclosed emulsions having the claimed nOSA-starch-to-oil ratio. Thus, D2 to D4 provided to the skilled person confronted with the underlying problem a pointer toward the claimed solution. D5 showed why the observed results were not unexpected.

VII. The proprietor's (respondent) arguments can be summarised as follows.

- The claimed invention was sufficiently disclosed. The appellant's assertions were not substantiated. The patent provided clear instructions for preparing the claimed beverage. Relying on those instructions and common general knowledge, the skilled person had no difficulties to carry out the invention.
- The claimed subject-matter involved an inventive step. D1 was the closest prior art, and the

examples disclosed in this document were the starting point for assessing inventive step. The claimed subject-matter differed from the teaching of D1 in that nOSA starch was used as the emulsifier rather than sucrose monopalmitate. Furthermore, it differed in the claimed nOSA-starch-to-essential-oil ratio. The underlying problem was the provision of an alternative clear beverage containing an emulsified essential citrus oil and a process for preparing that beverage.

- No incentive could be found in D1 to use nOSA starch, let alone the claimed nOSA-starch-to-essential-oil ratio to solve the underlying problem. D1 suggested minimising the amount of surfactant used in the disclosed emulsion. Thus, it pointed away from the claimed solution. D2 to D5 did not hint at the solution either. D2 aimed at stabilising emulsions, not at providing clear emulsions. It did not establish a correlation between the amount of nOSA starch, particle size and clarity of emulsions either. Moreover, irrespective of the size of the particles contained in the emulsions described in D2, all those emulsions were opaque. D3 aimed at obtaining opaque and cloudy beverages rather than clear beverages. Most of the described beverages contained an excess of oil and, irrespective of that, those beverages were opaque. D4 related neither to beverages nor clear emulsions or emulsions comprising citrus oils. It did not teach that an increase in nOSA starch resulted in a decrease in the particle size in emulsions either. None of D2 to D4 showed that a decrease in particle size necessarily resulted in clear emulsions. D5 was irrelevant because it described chemical reactions which occurred in



extreme conditions not found in the claimed beverages.

### **The parties' requests**

- VIII. The appellant requested that the decision be set aside and that the patent be revoked in its entirety.
- IX. The respondent requested that the appeal be dismissed or, alternatively, that the patent be maintained on the basis of one of auxiliary requests 1 to 7 filed with the reply to the statement setting out the grounds of appeal.

### **Reasons for the Decision**

#### 1. *Sufficiency of disclosure*

1.1 The appellant contested the opposition division's finding that the claimed invention was sufficiently disclosed. It submitted essentially that:

- the patent did not provide sufficient information to prepare a clear beverage having a turbidity of less than 5 NTU
- the only way to prepare a beverage having that turbidity and the claimed nOSA-starch-to-essential-oil ratio was by trial and error, carrying out a large number of tests involving an undue burden
- the requirements established by the case law that the patent must describe at least one way to carry out the invention and that the skilled person must be able to perform the invention across the entire scope claimed were not fulfilled

- 1.2 The appellant's arguments are not convincing.
- 1.3 Claim 1 relates to a clear beverage having a turbidity of less than 5 NTU. Claim 4 relates to a process for making that beverage.
- 1.4 As stated by the opposition division in the appealed decision, the patent is addressed to a skilled person. This person knows how to prepare beverages comprising emulsified essential oils. The patent describes in detail the ingredients and the steps for manufacturing the claimed beverage (see paragraphs [0073] to [0102] of the description). Furthermore, it describes examples of beverages according to the invention (see Tables 9 to 11). As noted by the opposition division, all these beverages achieve the claimed turbidity (see Table 11).
- 1.5 It is true that the claimed turbidity is observed some days after preparation of the beverages. However, as explained in paragraph [0094] of the patent, beverages are typically stored for a period of time after production, known as the quarantine period. Reading this passage and taking into account the results in Table 11, the skilled person would understand that the end product reaches the desired turbidity just on resting for a short period, without any further intervention being necessary.
- 1.6 Thus, the patent provides sufficient information to produce the claimed beverage. The appellant has not provided any evidence that, when relying on the teaching of the patent and common general knowledge on the filing date, the skilled person would not have been able to prepare the claimed beverage. There is no evidence that the only way to prepare that beverage is

by performing trial-and-error experimentation involving an undue burden, as submitted by the appellant.

1.7 For these reasons, the requirement of sufficiency of disclosure is fulfilled. Consequently, the ground for opposition under Article 100(b) EPC does not prejudice the maintenance of the patent.

## 2. *Inventive step*

2.1 The opposed patent relates to a clear beverage having a turbidity of less than 5 NTU which comprises an emulsified essential oil, namely citrus oil. Furthermore, it relates to a process for manufacturing that beverage.

### *The closest prior art*

2.2 The parties did not contest the opposition division's finding that D1 is the closest prior art. The board has no reason to diverge from this choice. Like the opposed patent, D1 relates to a process for preparing a clear beverage comprising emulsified essential oils such as lemon, orange, clove, mint and cinnamon oil. The process involves the use of an emulsifier and entails emulsification, homogenisation, dilution and pasteurisation steps (paragraphs [0003], [0008], [0009] and [0023]; the examples; and the claims).

2.3 D1 focuses primarily on the preparation of beverages comprising a 2:1 ratio of an essential citrus oil, such as orange or lemon oil, and sucrose monopalmitate, an emulsifier (paragraphs [0009], [0015] and [0017] and the examples). The only two practical examples of the disclosed invention are the beverages of examples 1 and 2. These contain a citrus oil (from orange or

lemon) and sucrose monopalmitate in a 2:1 ratio. The turbidity of these beverages is "around 3 FTU", which corresponds essentially to 3 NTU and is therefore within the claimed range.

2.4 As noted by the appellant, D1 suggests a long list of alternative surfactants for preparing the disclosed beverages. Among these surfactants, mention is made of nOSA starch (see the list in Table 1 on pages 2 and 3 and the reference to "sodium octenyl succinate starch"). However, D1 does not describe even one beverage comprising the surfactants enumerated in this long list, let alone nOSA starch.

2.5 Hence, the beverages disclosed in examples 1 and 2, which are the only concrete disclosures of the invention described in D1, are the starting point for assessing inventive step.

*Distinguishing features*

2.6 As concluded by the opposition division, the claimed beverage differs from the beverages exemplified in D1 in that:

- nOSA starch is used as the emulsifier
- the ratio between the nOSA starch and essential oil is between 1.2:1 and 8:1

2.7 The appellant argued that nOSA starch was not a distinguishing feature because it was disclosed in Table 1 of D1.

2.8 This argument is not persuasive. As mentioned above, the beverages of examples 1 and 2 of D1 are the

starting point for assessing inventive step. Thus, these are the beverages which must be considered to identify the technical features distinguishing the claimed invention from the prior art. Since these beverages do not contain nOSA starch, this surfactant is a distinguishing technical feature.

*Technical effect*

- 2.9 The patent describes the preparation of clear beverages comprising an emulsified essential citrus oil and nOSA starch, having a turbidity of less than 5 NTU. However, the properties of these beverages are not compared with those of the beverages of the closest prior art D1, which comprise sucrose monopalmitate as the emulsifier.
- 2.10 Therefore, as decided by the opposition division, there is no evidence that the use of nOSA starch as an emulsifier, or its use in the claimed ratio with essential oil, is associated with any technical effect going beyond that induced by sucrose palmitate in the beverage of D1.
- 2.11 The respondent argued that the claimed beverages were "more natural" and cheaper than those of the prior art. However, these arguments are neither convincing nor relevant to the decision. The concept of being "more natural" cannot be quantified in technical terms, and whether a beverage is cheaper relates to economic rather than technical considerations. Moreover, even if these aspects were taken into account, no proper comparison was made with the closest prior art.

*Technical problem*

- 2.12 As decided by the opposition division and acknowledged by the parties during the oral proceedings, the underlying technical problem is the provision of an alternative clear beverage containing an essential citrus oil and a process for making it.
- 2.13 The appellant argued that claim 4 did not solve the problem of providing a process for manufacturing the claimed clear beverage across the entire scope claimed. It submitted that claim 4 did not mention the quarantine period, which, according to the examples, was required to achieve the claimed turbidity.
- 2.14 This argument is not convincing. It is uncontested that all beverages prepared in the examples reach the claimed turbidity of less than 5 NTU (see Table 11). Immediately after the dilution step, there is a transient period in which the turbidity is higher. However, the turbidity of all beverages decreases sharply shortly afterwards, reaching the claimed turbidity without any need for further intervention. Moreover, the patent teaches that in the relevant field it was common practice to store beverages for some time, known as the quarantine period, before they are used (see paragraph [0094]). Consequently, there is no reason to conclude that the problem has not been solved across the entire scope claimed.
- 2.15 The appellant's argument that the claimed turbidity is not reached across the entire scope claimed does not concern the requirement of inventive step but sufficiency of disclosure, which, as concluded above, has been found to be fulfilled.

*Non-obviousness of the claimed solution*

- 2.16 The appellant argued that, when confronted with the underlying technical problem, the skilled person would have found in D1 the incentive to replace the sucrose monopalmitate used in the beverages exemplified in this document with nOSA starch and to use this emulsifier in the claimed ratio with essential oil. Paragraphs [0008], [0009], [0010] and [0012] of D1 taught that a variety of emulsifiers could be used to prepare clear emulsions, and Table 1, which listed them, mentioned nOSA starch.
- 2.17 Furthermore, the appellant argued that although D1 mentioned only a 2:1 ratio between the essential oil and the surfactant, paragraph [0016] taught that this ratio could be adjusted to achieve clarity. In addition, paragraph [0015] mentioned the possibility of increasing the amount of surfactant.
- 2.18 Thus, when looking for an alternative beverage, the skilled person would have replaced sucrose monopalmitate with nOSA starch and would have used the latter in a ratio with the oil which was within the claimed range. Citing decisions T 144/16 and T 148/10, the appellant argued that, when looking for an alternative beverage, the skilled person would not have only taken into account the preferred embodiments of D1 but also all alternatives taught in this document. Selections from known alternatives did not involve inventive skills. Hence, in its opinion, by simply following the teaching of D1, the skilled person would have arrived at the claimed invention.
- 2.19 The board is not persuaded by the appellant's arguments.

2.20 D1 champions the use of sucrose monopalmitate for preparing beverages comprising citrus essential oils. Sucrose monopalmitate is the only emulsifier for which some practical technical information is provided, e.g. in terms of loading and the ratio of essential oil to emulsifier. It is also the only surfactant used to prepare the exemplified beverages. The only mentioned ratio between essential oil and sucrose monopalmitate is 2:1. This means that the oil is in large excess (see paragraphs [0015] and [0017] and the examples). This aligns with the idea of using a low amount of emulsifier advocated in paragraph [0008].

2.21 It is undisputed that, as noted by the appellant, D1 mentions the possibility of using other emulsifiers and adjusting the oil-to-emulsifier ratio. However:

- as stated in paragraphs [0002] to [0010] of the patent, at the filing date, the production of clear beverages comprising emulsified essential oils was still challenging and required complex washing procedures to remove insoluble terpenes
- the technical information presented in D1 on the use of surfactants other than sucrose monopalmitate is very limited
- D1 consistently refers to a 2:1 essential-oil-to-emulsifier ratio, and this is the only ratio mentioned in this document

Thus, the board is of the opinion that even if the skilled person had decided to replace sucrose monopalmitate with nOSA starch, they would not have considered significantly increasing the surfactant-to-



oil ratio and deviating considerably from the ratio disclosed in the examples of D1, which are the starting point for assessing inventive step (see 2.5 above).

2.22 The appellant referred to a passage in paragraph [0015] of D1 which mentions the possibility of increasing the emulsifier loading. However, this passage relates to a special embodiment in which an insoluble nutraceutical is also included in the beverage. Therefore, this passage must be read in the context of the invention disclosed in D1 described above.

2.23 The appellant also argued that when starting from D1, the skilled person would, in the first step, have replaced sucrose palmitate with nOSA starch. Upon doing this, the skilled person would have found that the emulsion was turbid and, consequently, in the second step, would have increased the amount of surfactant, thus arriving at the claimed clear beverage.

2.24 This argument is not convincing either. There is no evidence, let alone in the opposed patent as argued by the appellant, that an emulsion obtained by replacing the amount of sucrose palmitate present in the beverages exemplified in D1 with nOSA starch would be unclear. During the oral proceedings, after being asked to provide such evidence, the appellant conceded that none was found in the opposed patent and referred instead to the respondent's submissions. However, those submissions do not provide that evidence either. This means that the appellant's argument is unsubstantiated and based on hindsight. As such, it is not convincing.

2.25 The appellant argued that documents D2 to D4 provided a pointer to the claimed solution of the underlying

technical problem. The board does not agree with this contention either.

- 2.26 D2 is an article describing the use of ester gums to improve the stability and prevent the growth of the droplets in emulsions comprising orange oil and nOSA starch as an emulsifier. Drawing attention to Figures 1 and 4 and pages 1024 and 1025, the appellant argued that D2 taught that the size of oil particles in emulsions decreased if the amount of nOSA starch was increased. It also noted that the emulsions shown in Figure 4, comprising an excess of oil, were cloudy. In its opinion, taking into account these findings, the skilled person confronted with the underlying problem would have prepared beverages comprising nOSA starch and citrus oils in the claimed ratio, i.e. comprising an excess of nOSA starch.
- 2.27 These arguments fail to convince. D2 focuses on the possibility of stabilising emulsions comprised in beverages by minimising the increase of the droplet size during storage. However, D2 does not mention the problem of preparing clear beverages. A correlation between droplet size and turbidity is not mentioned either.
- 2.28 Paragraph 3.1 of D2 shows that the initial diameter of the droplets changes only slightly by increasing the nOSA starch concentration. In the presence of 5% wt oil, no significant changes are observed when the nOSA starch concentration is increased above 4% wt. Furthermore, a progressive increase in droplet size is observed afterwards in all tested emulsions, including those comprising an excess of nOSA starch. Although the strongest increase is observed in the emulsion

containing oil in excess, all emulsions are affected, including those comprising an excess of nOSA starch.

- 2.29 All emulsions shown in Figure 4b of D2, including those stabilised by high amounts of ester gum, are turbid. Although these emulsions contain an excess of oil, Figure 4b shows that a substantial decrease of the size of the droplets contained in an emulsion does not necessarily translate into a decrease in turbidity.
- 2.30 Finally, the relevant teaching in D2 is that the increase in droplet size in emulsions of essential oils can be prevented using, in addition to nOSA starch, a stabilising agent, namely an ester gum (see abstract, Figure 4 and section 3.2).
- 2.31 For these reasons, relying on D2, the skilled person would not have reasonably expected that the turbidity of an emulsion is reduced when the amount of nOSA starch it contains is increased. Consequently, D2 does not contain a pointer to the claimed solution.
- 2.32 D3 would not have provided a pointer to that solution either. D3 discusses how the oil phase concentration affects the rheological properties and the stability of beverages comprising an emulsion. The appellant argued that the last paragraph of page 154 of D3 taught that the opacity of emulsions increased when the volume fraction of the oil phase was increased. It also argued that Table 2 showed that the emulsions comprising the highest nOSA-starch-to-essential-oil ratio had the lowest opacity. It drew attention to the emulsion comprising a 20% wt oil phase, which comprised a nOSA-starch-to-essential-oil ratio of 1.2:1, within the claimed range. It then argued that, starting from D1 and taking into account the teaching of D3, the skilled

person would have prepared beverages comprising nOSA starch and citrus oils within the claimed ratio.

- 2.33 These arguments are not persuasive. D3 focuses on the problem of stabilising beverages containing emulsions. However, the purpose of the study described in D3 is not the production of clear beverages. It is the opposite, namely the preparation of beverages having an opaque, cloudy appearance. In fact, all beverages described are opaque (see Table 2 on page 154 and the following paragraph stating that increases in opacity are advantageous because "the beverages are more similar to natural juices"; the conclusions on page 155 mentioning a "beneficial increase of beverage opacity"; and page 147, fifth line of the introduction, referring to a "suitable cloudy appearance").
- 2.34 For these reasons alone, the skilled person would not have turned to D3 when confronted with the problem of providing a clear beverage. Concerning the emulsion in Table 2 of D3 mentioned by the appellant, which comprises a nOSA-starch-to-essential-oil ratio of 1.2:1, the following should be considered. First, as mentioned above, this emulsion is opaque. Furthermore, the oil phase, which makes up 20% wt of the emulsion, is a 1:1 mixture of an essential oil and rosin esters. This means that it contains a very large amount, 50% wt, of an oil-soluble additive. In addition, D3 does not mention which essential oil was used for the tests. For this reason, relying on D3, the skilled person would not have inferred relevant information or useful guidelines for preparing a clear beverage comprising nOSA starch and an essential citrus oil according to the claimed invention.

- 2.35 For these reasons, the skilled person confronted with the underlying problem would not have combined the teaching of D1 with that of D3.
- 2.36 The appellant also referred to D4, submitting that this document disclosed stabilised emulsions containing an nOSA-starch-to-oil ratio of 3.2:1. In its opinion, D4 provided to the skilled person confronted with the underlying problem the incentive to prepare beverages comprising nOSA starch and citrus oils in the claimed ratio.
- 2.37 These arguments are not convincing either. As noted by the respondent, D4 relates to the stabilisation of emulsions comprising vegetable oils, such as sunflower oils. D4 does not discuss the preparation of beverages, let alone clear beverages comprising essential citrus oils. No mention is made of turbidity, opacity or clearness of the emulsions either.
- 2.38 The appellant drew attention to an emulsion exemplified in Table 1 of D4 which contained 16% nOSA starch and 5% oil. However, the appellant was rather selective here because most of the exemplified emulsions in this table contain oil in large excess. Furthermore, D4 teaches that the stability of the emulsions is increased when the oil concentration is increased (see page 191, left-hand side, first two lines). This means that D4 teaches away from the claimed solution.
- 2.39 For these reasons, the skilled person confronted with the underlying problem would not have combined the teaching of D1 with that of D4.
- 2.40 Finally, the appellant postulated that the decrease in turbidity observed in the tests in the opposed patent

was due to an acid-catalysed hydrolysis of the insoluble terpenes contained in acidic essential citrus oil. This hydrolysis led to the formation of more soluble terpinols and terpin. In its opinion, this was not surprising in view of D5, which discussed these hydrolytic reactions. Therefore, in its opinion, the observed decrease in opacity and the claimed solutions were to be expected.

2.41 These arguments fail to persuade. The appellant referred to D5 to suggest an alternative mechanism of how the invention works. However, this document is unrelated to the invention and does not hint in any way at the claimed solution. D5 does not relate to beverages, clear emulsions or opacity. Furthermore, the observed hydrolysis of limonene occurred in harsh conditions, at 75°C or at a very low pH of 2.73 with a half-life of 200 days. These conditions are very different from those present in the claimed products. For these reasons, D5 is irrelevant for the assessment of inventive step.

2.42 In view of the arguments presented above, it is concluded that the subject-matter claimed in the main request involves an inventive step over the teaching of D1 alone or in combination with that of D2 to D5.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



K. Götz-Wein

A. Haderlein

Decision electronically authenticated