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**Datasheet for the decision  
of 22 March 2012**

**Case Number:** T 2215/08 - 3.3.10  
**Application Number:** 00110530.3  
**Publication Number:** 1053993  
**IPC:** C07C 51/43, C07C 57/10  
**Language of the proceedings:** EN

**Title of invention:**

Potassium sorbate granulate and production processes thereof

**Applicant:**

DAICEL CHEMICAL INDUSTRIES, LTD.

**Opponent:**

Nutrinova Nutrition Specialties & Food Ingredients

**Headword:**

Potassium sorbate granulate/DAICEL

**Relevant legal provisions:**

EPC Art. 54, 56

**Keyword:**

"Main request: novelty (no) - prior use, namely sale of product having required Na content and overall pore volume sufficiently substantiated (yes); process step of "adjusting" certain parameters implicitly disclosed by sale of product having said parameters; purpose of the claimed process not a functional technical feature"

"Auxiliary request 4: novelty (no) - use of a process for a particular purpose is nothing but that very same process"

"Auxiliary requests 1 to 3 and 5 to 7: novelty (yes) - neutralisation step not disclosed by sale of product"

"Auxiliary requests 1 to 3 and 5 to 7: inventive step (no) - obvious to neutralise with potassium hydroxide having low Na content in order to produce potassium sorbate having low Na content"

**Decisions cited:**

G 0002/88, G 0006/88, T 0328/87, T 0210/93, T 0355/97,  
T 0482/99, T 1049/99, T 0684/02, T 1343/04, T 1197/07

**Catchword:**

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Case Number: T 2215/08 - 3.3.10

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.10**  
**of 22 March 2012**

**Appellant:** Nutrinova Nutrition Specialties & Food  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
24 September 2008 concerning maintenance of  
European patent No. 1053993 in amended form.

**Composition of the Board:**

**Chairman:** P. Gryczka  
**Members:** J. Mercey  
D. S. Rogers

## Summary of Facts and Submissions

- I. The Appellant (Opponent) lodged an appeal against the interlocutory decision of the Opposition Division that European patent No. 1 053 993 in amended form met the requirements of the EPC.
- II. Notice of Opposition had been filed by the Appellant requesting revocation of the patent as granted in its entirety on the grounds of *inter alia* lack of novelty and inventive step (Article 100(a) EPC). *Inter alia* the following documents were submitted in opposition proceedings:
- (1a) Test report of elemental analysis, including sodium content, of potassium sorbate granulate, Product-Nummer IKSS315, Charge 1922 (dated 20.03.1999),
- (1b) Test report of pore volume of potassium sorbate, Mat-Nr 1092, Charge 1922 of 17.03.1999 (dated 13.05.2005),
- (1c): Purchase order number 99-00435 for 100kg of potassium sorbate (dated 12.03.1999),
- (1d) Nutrinova Manufacturing Guide (dated 25.09.1998),
- (1e): Invoice from Nutrinova for 100kg of potassium sorbate granular, Batch 1922, Order No. PO-99-00435 (dated 31.03.1999),
- (4) EP-B-4049,
- (9) DE-A-2450184 and
- (13) Declaration of Mr. Purps (dated 16.04.2008).
- III. The decision under appeal was based on the patent as amended according to the then pending auxiliary request II, independent claim 1 of said request reading as follows:

"Process for improving the stability of the hue of a granulated product of potassium sorbate, including the step of adjusting

(i) the overall pore volume to equal to or less than 0.4 ml/g and the Na content to equal to or less than 1000 ppm."

IV. The Opposition Division held that the claims of the then pending auxiliary request II satisfied the requirements of Article 123(2) and (3) EPC, and that the subject-matter thereof was novel, the alleged prior use not having been proven with a sufficient degree of certainty. More particularly, in view of the erased details in the documents (1c) and (1e) relating to the sale of potassium sorbate granulate by Nutrinova (the Opponent), it could not be ascertained whether the sale was an open commercial transaction or subject to an obligation of confidentiality. Nor had it been proved up to the hilt that the sample tested in document (1a), giving the results of the sodium content measurements, and in document (1b), giving the results of the overall pore volume measurements, were identical, since although said samples both had the same charge number, the potassium sorbate had in each case a different product number. The subject-matter involved an inventive step starting from document (4) as the closest prior art.

V. In a communication of the Board dated 23 December 2011, the Board expressed the preliminary opinion that *inter alia* the purpose of the method of claim 1 as upheld by the Opposition Division, namely for "improving the stability of the hue", may not be regarded as a

functional technical feature in the sense of decisions G 2/88 and G 6/88 (OJ EPO, 1990, 93 and 114, respectively) and questioned whether the process step of "adjusting" was also (implicitly) disclosed if the product was made available to the public.

VI. At the oral proceedings before the Board, held on 22 March 2012, the Respondent (Patent proprietor) filed auxiliary requests 1 to 7, these requests superseding the previous auxiliary requests.

Claim 1 of auxiliary request 1 differed from claim 1 of the main request, i.e. auxiliary request II as upheld by the Opposition Division, in that it comprised the step of neutralizing sorbic acid with a potassium hydroxide having a molar ratio of Na to K (Na/K) of equal to or less than 0.006.

Claim 1 of auxiliary request 2 differed from claim 1 of auxiliary request 1 in that it comprised the additional steps of moisture-conditioning 100 parts by weight of the potassium sorbate with 1 to 8.5 parts by weight of water and 1 to 8 parts by weight of a water-soluble organic solvent, and subjecting the moisture-conditioned potassium sorbate to extrusion granulation.

Claim 1 of auxiliary request 3 differed from claim 1 of auxiliary request 1 in that the molar ratio of Na to K was equal to or less than 0.0024, and in that it comprised the additional step of granulating the potassium sorbate.

Claim 1 of auxiliary request 4 differed from claim 1 of the main request in that the "Process for improving the

stability of the hue" was reformulated as the "Use of a process for improving the stability of the hue".

Claim 1 of each of auxiliary requests 5 to 7 differed from claim 1 of each of auxiliary requests 1 to 3 in the same manner by which claim 1 of auxiliary request 4 differed from claim 1 of the main request, namely by being reworded as a "Use of a process".

VII. The Appellant argued that the subject-matter of claim 1 of the main request was not novel in view of the sale of 100kg of potassium sorbate granulate having a sodium content of less than 1000 ppm and an overall pore volume of less than 0.4 ml/g in March 1999. Since claim 1 contained no concrete process steps, but merely the "empty" step of "adjusting", it embraced every process for making such a product, and thus also the process by which the product sold in 1999 was made. With regard to the gaps in the chain of evidence alleged by the Opposition Division, with its Grounds of Appeal, the Appellant filed clean copies of documents (1c-2) and (1e-2) (originally filed before the Opposition Decision as documents (1c) and (1e)), wherein no details had been erased, together with new documents (1f), (1g) and (1h):

(1f): Delivery notice for 4 boxes of potassium sorbate with total gross weight 106kg, Order No. PO-99-00435 (dated 31.03.1999),

(1g): Test report for pore volume of Kaliumsorbat Granulat Charge 1922 of 17.03.1999 (dated 20.03.2008) and

(1h): Test report for pore volume of Kaliumsorbat Granulat Charge 1922 (dated 23.01.2009).

It argued that the products analysed in documents (1a) and (1b) were indeed one and the same, since both products were designated potassium sorbate and uncontestedly had the same charge number, it being usual practice to allocate a charge number only once, as confirmed by the declaration (13). Furthermore, document (1b) referred to "1092 Charge 1922 vom 17.03.1999", this date corresponding to that given on document (1a), referring to IKSS315, Charge 1922. A sample made in 1999 was still available for testing in 2005 (document (1b) being dated 13.05.2005), since it was the usual practice of the manufacturer, Nutrinova, to keep a sample of each manufactured product for a period of 10 years, as show by document (1d). Documents (1g) and (1h) confirmed that the pore volume of potassium sorbate granulate did not change over time, such that it could be assumed that the pore volume of the potassium sorbate sample measured in document (1b) in 2005 was a true indication of its pore volume when it was sold in 1999.

The Appellant argued that auxiliary requests 1 to 7 should not be admitted into the proceedings, since they were filed at a very late stage of the proceedings. More particularly, the change of category of claim 1 of auxiliary requests 4 to 7 from "a process" to a "use of a process" led to a potential extension of the protection conferred, which offended against Article 123(3) EPC.

The subject-matter of claim 1 of auxiliary request 4 was the same as that of claim 1 of the main request, since the "use of a process" corresponded to the same



subject-matter as the process *per se*. As such, its subject-matter was also not novel over the prior use.

The Appellant acknowledged that the processes of claim 1 of each of the auxiliary requests 1 to 3 and 5 to 7 were novel, but argued that they were not inventive, the prior use representing the closest prior art. If the problem were to produce potassium sorbate granulate with a known low sodium content, then it was obvious to neutralise sorbic acid with potassium hydroxide having a low sodium content and thus having a low molar ratio of sodium to potassium, document (9) teaching the classical method of neutralisation of sorbic acid with potassium hydroxide, together with the steps of moisture-conditioning and extrusion granulation (paragraph [0025] of the patent in suit also describing said techniques as known or conventional).

VIII. The Respondent submitted that the process of claim 1 was novel for at least the reason that the purpose of the process, namely for "improving the stability of the hue", which should be regarded as a functional technical feature in the sense of decision G 2/88, was not disclosed by the mere sale of potassium sorbate granulate, even if this had the required sodium content and pore volume. The Respondent maintained, however, its position that this was not the case, since no evidence had been provided that the designations Kaliumsorbit, Granulat IKSS315 Charge 1922 in document (1a) and Kaliumsorbit MatNr.:1092 Charge 1922 in document (1b), and the potassium sorbate granulate, Batch 1922 in document (1e) referred to the same product, such that it had not been shown that the

potassium sorbate granulate allegedly sold did indeed have the required properties.

The Respondent submitted that the auxiliary requests 1 to 7 should be admitted into the proceedings as they were based on auxiliary requests I to VII, which were filed with letter dated 22 February 2012 in direct response to the communication of the Board. The additional amendments made to the previous auxiliary requests at the oral proceedings before the Board were in response to the Appellant's objections under Article 84 EPC raised for the first time during these oral proceedings.

Since claim 1 of each of auxiliary requests 4 to 7 was now directed to the "use of a process" instead of merely to the process *per se*, these claims were now clearly "use" claims in the sense of decision G 2/88. The subject-matter of said claims was thus novel for at least the reason that they contained a technical teaching not disclosed by the prior use, namely "improving the stability of the hue".

The Respondent argued that the process of claim 1 of auxiliary requests 1 to 3 and 5 to 7 was inventive, and that document (4) and not the prior use represented the closest state of the art, since document (4) explicitly addressed a **process** for the preparation of potassium sorbate granulate. Starting, however, from the prior use, the problem was the provision of a reproducible and controlled process for preparing potassium sorbate granulate having the required properties. From the single sale of the product, the skilled person would not have known which of the parameters of the potassium

sorbate granulate he had to adjust in order to improve the stability of the hue, the overall pore volume and sodium content being merely two of the parameters he could have adjusted.

- IX. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested that the appeal be dismissed, or, alternatively, that the decision under appeal be set aside and the patent be maintained on the basis of any of auxiliary requests 1 to 7 filed during the oral proceedings before the Board.

## **Reasons for the Decision**

1. The appeal is admissible.

### *Main request*

2. *Novelty*

- 2.1 The Appellant argued that the subject-matter of claim 1 of the main request was not novel, since the sale by Nutrinova (namely the Appellant) to Unilever Polska of 100kg of potassium sorbate granulate having a sodium content of less than 1000 ppm and an overall pore volume of less than 0.4 ml/g in March 1999 made the claimed process available to the public before the priority date of the patent in suit.

- 2.1.1 Public prior use is adequately substantiated if specific details are given of (a) when the act of prior

use occurred, (b) what was made available to the public and (c) the circumstances of the act of use, i.e. where, how and by whom the subject-matter was made public through (see T 328/87, OJ 1992, 701, point 3 of the reasons).

2.1.2 In the present case, since complete copies of documents (1c-2) and (1e-2), wherein no parts thereof are erased, and new document (1f), have now been filed, said purchase order, invoice and delivery notice, respectively, being linked by the Order Number 99-00435, any doubts with regard to whether the sale was indeed an open commercial transaction (see point IV above) have now been dispelled. The Respondent also no longer contested that 100 kg of potassium sorbate granulate had been sold by Nutrinova and delivered on 31 March 1999 to Unilever Polska. Thus the "when" and "circumstances" of the act of prior use have been uncontestedly adequately substantiated.

2.1.3 In order to show **what** had been sold, the Appellant provided the test reports (1a) and (1b) which show that "Kaliumsorbit, Granulat IKSS315 Charge 1922" (1a) has a sodium content of 690 ppm ( $\pm 20\%$ ) and a product designated "Kaliumsorbit MatNr.:1092 Charge 1922 vom 17.03.1999" (1b) has a total pore volume of 0.17 ml/g, both values uncontestedly falling within the limits given in claim 1. Document (1e), namely the invoice for the product sold refers to "potassium sorbate granular, Batch 1922".

2.1.4 The Respondent maintained, however, that it had not been unequivocally demonstrated that the product sold had the required properties, namely a sodium content of

less than 1000 ppm and an overall pore volume of less than 0.4 ml/g. More particularly, it had not been shown that the designations for potassium sorbate granulate in each of documents (1a), (1b) and (1e) clearly referred to one and the same product, since document (1a) referred to a product IKSS315, document (1b) to MatNr.:1092, and document (1e) contained no product number whatsoever.

However, all of these documents refer to potassium sorbate having the same charge number, namely 1922. As confirmed in the declaration (13) by Mr. Purps, an employee of Nutrinova since September 1997 and in charge of Production and Technology, it was usual practice to allocate a charge number only once, such that the charge number 1922 alone was an unambiguous assignment of the material. Mr. Purps further submitted that the designations IKSS315 and 1902 were for the same product, namely potassium sorbate granulate, which were used by Nutrinova purely for internal purposes, and as such neither was to be found on the external documents (1e) or (1f). He further explained that the internal designation changed from IKSS315 to 1902 after the introduction of the new software "SAP" in 1998 and were used in parallel for ca. 3 years therefrom.

The overall pore volume measurement of the product made in 1999 could be carried out in 2005 (as reported in document (1b)), since the Manufacturing Guide of Nutrinova dated 25 September 1998 (document (1d)) stated that after a finished product had been analysed, a reference sample ("Rückstellmuster") was placed in a polyethylene bottle with screw cap, labelled with

material number, charge number and date, and stored for a period of 10 years.

2.1.5 The Board sees no reasons to doubt Mr. Purps' submissions and thus holds that it is clear from the product name together with the batch number alone that the documents (1a), (1b) and (1e) all refer to the same batch of potassium sorbate granulate, the internal product number assigned to potassium granulate being irrelevant. It is thus deemed proven that the product sold by Nutrinova in March 1999 was potassium sorbate granulate having a sodium content of less than 1000 ppm and an overall pore volume of less than 0.4 ml/g. As such the question of "what" was made available to the public has been adequately substantiated.

2.1.6 The Respondent further submitted that the date of the test report (1b), wherein the pore volume was determined, was 13 May 2005, namely more than 5 years after the production date of the potassium sorbate granulate of on or before 17 March 1999. It could thus not be concluded that the overall pore volume as measured in 2005 was the same as that of the product delivered on 31 March 1999, since no information had been provided confirming that the storage conditions did not influence the overall pore volume.

However, the Respondent, who by alleging that the overall pore volume might be influenced by the storage conditions, carries the burden of proving its allegation (see decision T 355/97, point 2.5.1 of the reasons, not published in OJ EPO), has not provided any evidence that this is indeed the case. In fact, the Appellant has provided two new test reports, (1g) and

(1h), which show that the overall pore volume of the sample from 17 March 1999 as measured in 2008 and 2009 was the same as that measured in 2005. Thus, over a period of 4 years, no measurable change in the overall pore volume could be observed. The Board is thus not convinced by the Respondent's arguments, and sees no reason for not accepting that the measurements of the overall pore volume performed in 2005 reflect the overall pore volume of the product in 1999.

2.1.7 The Respondent argued that novelty of the claimed subject-matter could not be destroyed by the sale of one single product which "accidentally" had the required sodium content and pore volume, when various commercial samples of potassium sorbate produced by Nutrinova obtained in the years 1996 to 2007 all had a sodium content of above 1000 ppm.

However, a single sale is sufficient to render the article sold available to the public within the meaning of Article 54(2) EPC, provided the buyer is not bound by an obligation to maintain secrecy (see T 482/89, OJ EPO 1992, 646, point 3 of the reasons). It is thus irrelevant whether other products not falling under present claim 1 were available to the public or not.

2.1.8 The Board thus comes to the conclusion that potassium sorbate granulate having a sodium content of 690 ppm ( $\pm 20\%$ ) and an overall pore volume of 0.17 ml/g has been made available to the public before the priority date of the patent in suit by its sale. This potassium sorbate thus has all the structural characteristics required for the product prepared by the process according to claim 1.

2.2 Claim 1 is a "process" claim with the single process step of "adjusting" the overall pore volume and sodium content. The Respondent argued that the sale of potassium sorbate did not make the process by which it was made also available to the public.

In the present case, however, the sole process step specified in claim 1 is the step of "adjusting" the overall pore volume and sodium content to the values indicated in the claim. A product having an overall pore volume and sodium content falling within the values indicated in the claim has necessarily been made by a process in which the pore volume and sodium content have been "adjusted" to within these desired values.

2.2.1 For these reasons, the Board holds that in the present case, the sale of potassium sorbate granulate having a sodium content of 690 ppm ( $\pm 20\%$ ) and an overall pore volume of 0.17 ml/g, also implicitly makes available to the public that it has been prepared by adjusting the sodium content and overall pore volume to these values.

2.3 Thus not only all the structural characteristics, but also the process feature of claim 1, were made available to the public before the priority date of the patent in suit by the prior use. For these reasons the process according to claim 1 is not novel.

2.4 The Respondent argued that the purpose of improving the stability of the hue was a functional technical feature of the claim in the sense of the decisions G 2/88 and G 6/88, the considerations underlying these decisions



relating to the use of products also being applicable to process claims. Said functional technical feature rendered the claimed process novel over the prior use, which did not disclose that adjustment of the sodium content and overall pore volume had an effect on the stability of the hue of the granulated product.

- 2.4.1 In the present case, claim 1 relates to a process which includes the physical step(s) of adjusting the overall pore volume and the sodium content of a potassium sorbate. Said claim is thus a "process" claim within the meaning of Article 64(2) EPC, since it specifically includes physical steps which result in the production of a product, namely a granulated potassium sorbate, and is not a "use" claim in the sense of decisions G 2/88 and G 6/88, which relate exclusively to claims directed to the use of a substance for achieving an effect. Thus, the purpose of the process in present claim 1, namely for "improving the stability of the hue", cannot be regarded as a functional technical feature, and hence cannot distinguish the subject-matter of the claim from the prior use. The criteria set out by the Enlarged Board of Appeal in the aforementioned decisions may only be applied to claims directed to the use of a substance for achieving an effect and cannot be extended to claims to a process for producing a product characterised by process steps, wherein the purpose of carrying out said process steps is indicated in the claim (see decisions T 1179/07, point 2.1.3 of the reasons for the decision, T 1343/04, point 2 of the reasons for the decision and T 1049/99, points 8.4.4 and 8.5 of the reasons for the decision, none published in OJ EPO).

- 2.5 For the above reasons, the Board concludes that by virtue of the sale of the product, a process according to claim 1 is disclosed, such that the subject-matter thereof is not novel.

*Auxiliary requests 1 to 7*

3. *Admissibility*

- 3.1 The Appellant argued that auxiliary requests 1 to 7 should not be admitted into the proceedings, since they were filed at a very late stage of the proceedings, namely during the oral proceedings.

- 3.2 These requests are based on auxiliary requests I to VII filed by the Respondent with letter dated 22 February 2012 in response to the preliminary opinion of the Board (see point V above). The amendments made to claim 1 of each of the auxiliary requests 1 to 7 are regarded as *bona fide* attempts to overcome the novelty objection based on the prior use in view of the observations in this communication of the Board. More particularly, concrete process step(s) from granted dependent claims 5 to 7 have been incorporated into claim 1 of each of auxiliary requests 1 to 3 and 5 to 7 in view of the possible implicit disclosure of the process feature "adjusting" by virtue of the alleged prior use. In addition, the "process" of claim 1 has been reformulated as a "use of a process" in auxiliary requests 4 to 7 in view of the indication that the purpose of the process may not be regarded as a functional technical feature. The additional amendments made to the previous auxiliary requests at the oral proceedings before the Board were in response to the

Appellant's objections under Article 84 EPC raised for the first time during these oral proceedings. Therefore these latter amendments are also considered to be appropriate and necessary. Furthermore, the Appellant was not hindered in its argumentation with regard to novelty and inventive step by the amendments carried out in the claims of the present requests, since these amendments did not amount to creating a fresh case necessitating a reconsideration of the objections and evidence brought forward so far by the Appellant against the patentability of the claimed subject matter.

- 3.3 The Board thus exercises its discretion to admit auxiliary requests 1 to 7 into the proceedings.

*Auxiliary requests 1 to 3*

4. *Article 123(2) and (3) EPC*

- 4.1 Article 100(c) was not a ground for opposition and the Appellant had no objections under Article 123(2) or (3) EPC to claim 1 of any of auxiliary requests 1 to 3. Claim 1 of each of these requests is a combination of granted claim 1, together with granted claims 5, 4 and 3, respectively. The structural features of granted claims 3 to 5 may be found in original claims 3 to 5, respectively. The Board thus concludes that the subject-matter of claim 1 of these requests does not extend beyond the content of the application as filed, such that the requirements of Article 123(2) EPC are satisfied.

- 4.2 The amended claims require that the process step of adjusting the overall pore volume and sodium content is

further defined as comprising neutralizing sorbic acid with a potassium hydroxide having particular molar ratios of Na to K, whereby the definition of the resulting product remains the same. The protection conferred is thereby restricted, which is in keeping with the requirements of Article 123(3) EPC.

5. *Novelty*

As indicated in point 4.2 above, the subject-matter of claim 1 of each of these requests comprises neutralizing sorbic acid with a potassium hydroxide having particular molar ratios of Na to K. Since such a neutralisation step is disclosed neither explicitly nor implicitly by the sale of potassium sorbate granulate having a sodium content of 690 ppm ( $\pm 20\%$ ) and an overall pore volume of 0.17 ml/g, the Board concludes that the subject-matter of claim 1 of each of auxiliary requests 1 to 3 is novel pursuant to Article 54 EPC. Novelty of these requests was not contested by the Appellant.

6. *Inventive step*

*Auxiliary request 1*

- 6.1 Claim 1 relates to a process for improving the stability of the hue of a granulated product of potassium sorbate, including the step of adjusting the overall pore volume to equal to or less than 0.4 ml/g and the sodium content to equal to or less than 1000 ppm comprising the step of neutralizing sorbic acid with a potassium hydroxide.

6.2 As outlined in point 2 above, a process for preparing potassium sorbate granulate having a sodium content of 690 ppm ( $\pm 20\%$ ) and an overall pore volume of 0,17 ml/g by adjusting the sodium content and overall pore volume to these values forms part of the prior art under Article 54(2) EPC and was considered by the Appellant to represent the closest state of the art.

6.2.1 The Respondent argued that not this single prior use, but rather document (4) represented the closest state of the art, since said document explicitly addressed a process for making potassium sorbate granulate, namely by contacting an aqueous solution of potassium sorbate with a fluidised bed of potassium sorbate particles.

However, document (4) discloses neither a sodium content nor a pore volume of the granulate produced. In contrast, the prior use discloses a potassium sorbate granulate having the required sodium content and overall pore volume and that it was made by a process which required adjustment to achieve these required properties. The Board concludes, therefore, that document (4) represents prior art which is further away from the patent in suit than the prior use.

6.2.2 Thus, the Board considers, in agreement with the Appellant that in the present case the prior use, namely the sale of potassium sorbate granulate documented in point 2 above, represents the closest state of the art and, hence, takes it as the starting point when assessing inventive step.

6.3 In view of this state of the art, the Respondent submitted that the problem underlying the patent in

suit was the provision of a reproducible and controlled process for preparing potassium sorbate granulate having an overall pore volume equal to or less than 0.4 ml/g and a sodium content equal to or less than 1000 ppm.

- 6.4 As the solution to this problem, claim 1 of auxiliary request 1 proposes a process comprising the step of neutralizing sorbic acid with a potassium hydroxide having a molar ratio of Na to K of equal to or less than 0.006.
- 6.5 Finally, it remains to be decided whether or not the proposed solution to the problem underlying the patent in suit involves an inventive step in view of the state of the art.
- 6.5.1 Document (9) specifically teaches that potassium sorbate granulate is usually made from powdered or crystalline potassium sorbate which is obtained by neutralizing sorbic acid with potassium hydroxide (see page 8, lines 5 to 13). Faced with the problem of producing potassium sorbate granulate with a known low sodium content, namely less than 1000 ppm, it was obvious for the skilled person to employ potassium hydroxide having a low sodium content in order to neutralise the sorbic acid, and thus also a low molar ratio of sodium to the desired counterion, namely potassium. The Respondent did not argue that any unexpected effect was associated with the particular molar ratio of Na to K of equal to or less than 0.006.
- 6.6 The Respondent did, however, argue that in view of the availability to the public of merely one sale of a

single charge of potassium sorbate granulate, the skilled person, wishing to produce an equally stable product would not have known which parameter to adjust in order to provide a product with the desired stability. From the test report (1a), for example, it could be seen that there were many impurities in the product sold, the prior art not teaching the skilled person which of these elements was responsible for the deterioration of the stability of the hue of potassium sorbate granulate. The skilled person would thus not have known that the sodium content was critical, and thus the argument that the skilled person would use sodium hydroxide with a low sodium content in order to produce potassium sorbate with a low sodium content was based upon *ex post facto* analysis.

However, the problem to be solved by the claimed process is merely to provide a reproducible and controlled process for preparing potassium sorbate granulate having an overall pore volume equal to or less than 0.4 ml/g and a sodium content equal to or less than 1000 ppm. Hence, the skilled person already knows that the sodium content of the desired product must be less than 1000 ppm and thus does not need to correlate this sodium content with any property of the granulate in order to solve the technical problem underlying the invention, namely to prepare said product in a reproducible and controlled manner.

6.7 As a result the Appellant's auxiliary request 1 is not allowable for lack of inventive step pursuant to Article 56 EPC.

*Auxiliary request 2*

- 6.8 Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 in that it comprises the additional steps of moisture-conditioning 100 parts by weight of the potassium sorbate with 1 to 8.5 parts by weight of water and 1 to 8 parts by weight of a water-soluble organic solvent and subjecting the moisture-conditioned potassium sorbate to extrusion granulation.
- 6.9 Document (9), however, already teaches a method of preparing potassium sorbate granulate which includes the steps of moisture-conditioning and extrusion granulation (see page 6, lines 6 to 19), such that these amendments cannot contribute to inventiveness of the subject-matter of claim 1 of auxiliary request 2 *vis-à-vis* this document. Furthermore, the Respondent did not argue that these steps contributed to inventive step, nor specifically that the particular weight ratios of potassium sorbate to water to organic solvent were associated with any unexpected effect.
- 6.10 Therefore, the considerations having regard to the assessment of inventive step given in points 6.2 to 6.6 above and the conclusion drawn in point 6.7 above with respect to claim 1 of auxiliary request 1 apply also to claim 1 of auxiliary request 2.
- 6.11 Thus, auxiliary request 2 is also not allowable for lack of inventive step pursuant to Article 56 EPC.



*Auxiliary request 3*

- 6.12 Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 1 in that the molar ratio of Na to K was equal to or less than 0.0024, and in that it comprises a granulation step.
- 6.13 Since the Respondent did not argue that any unexpected effect was associated with the particular molar ratio of Na to K of equal to or less than 0.0024, nor with the granulation step, the considerations having regard to the assessment of inventive step given in points 6.2 to 6.6 above and the conclusion drawn in point 6.7 above with respect to claim 1 of auxiliary request 1 apply equally to claim 1 of auxiliary request 3.
- 6.14 Thus, auxiliary request 3 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

*Auxiliary request 4*

7. *Novelty*

- 7.1 Claim 1 of auxiliary request 4 differs from claim 1 of the main request in that the "Process for improving the stability of the hue" has been reformulated as "Use of a process for improving the stability of the hue".
- 7.2 The Respondent argued that this claim was now clearly a "use" claim in the sense of decision G 2/88, such that the subject-matter thereof was thus novel over the prior use in view of the technical effect of "improving the stability of the hue".

7.3 However, claims to the use of a process are, in fact, directed to the preparation of a product, i.e. in the present case, potassium sorbate granulate having an overall pore volume of equal to or less than 0.4 ml/g and a sodium content of equal to or less than 1000 ppm. The use of the process for improving the stability of the hue comprises as technical feature only the step of adjusting the overall pore volume and sodium content which has as result the product defined in the claims. This Board thus shares the view expressed in decisions T 210/93 (see point 3.2.3 of the reasons) and T 684/02 (see point 5 of the reasons) (both not published in OJ EPO) that the use of a process for a particular purpose is "nothing but that very same process". Thus, as in the case of the main request, the **purpose** of the use of the process in claim 1, namely for "improving the stability of the hue", cannot be regarded as a functional technical feature in the sense of decisions G 2/88 and G 6/88, and hence cannot distinguish the subject-matter of the claim from the prior use.

7.4 Thus, the subject-matter of claim 1 of auxiliary request 4 is not novel for the very same reasons that the subject-matter of claim 1 of the main request is not novel (see point 2 above).

*Auxiliary requests 5 to 7*

8. *Novelty*

8.1 Claim 1 of each of auxiliary requests 5 to 7 differs from claim 1 of each of auxiliary requests 1 to 3 in that the "Process for improving the stability of the

hue" has been reformulated as "Use of a process for improving the stability of the hue".

8.2 Since the use of a process for a particular purpose is nothing but that very same process (see point 7.3 above), the subject-matter of claim 1 of each of auxiliary requests 4 to 7 is the same as that of claim 1 of each of auxiliary requests 1 to 3, respectively.

8.3 The subject-matter of claim 1 of each of auxiliary requests 4 to 7 is thus novel for the same reasons as those given above (see point 5) for claim 1 of each of auxiliary requests 1 to 3, respectively.

9. *Inventive step*

9.1 The subject-matter of claim 1 of each of auxiliary requests 4 to 7 is not inventive for the same reasons as those given above (see points 6.1 to 6.14) for claim 1 of each of auxiliary requests 1 to 3, respectively.

**Order**

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

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

K. Boelicke

P. Gryczka