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Datasheet for the decision of 26 November 2014

Case Number: T 1894/11 - 3.3.06

Application Number: 03814872.2

Publication Number: 1578894

IPC: C11D3/02, C11D3/20, C11D3/33, C11D3/37

Language of the proceedings: EN

Title of invention:

RINSE AID COMPOSITION CONTAINING WATER-SOLUBLE METAL SALT FOR USE IN AUTOMATIC DISHWASHING FOR GLASSWARE CORROSION PROTECTION

Patent Proprietor:

THE PROCTER & GAMBLE COMPANY

Opponents:

Henkel AG & Co. KGaA
Reckitt Benckiser (UK) Limited

Headword:

Rinse aid /Procter & Gamble

Relevant legal provisions:

EPC Art. 52(1), 56, 84, 114(2), 123(2)
RPBA Art. 12(4), 13(3)

Keyword:
Inventive step -
Main request and Auxiliary Requests 1 to 5 (no) -
Auxiliary Request 7 (yes)
Late-filed auxiliary requests - admitted (no) -
(Auxiliary Request 6A)
Clarity - Auxiliary Request 6 (no)
Amendments - allowable (yes) - Auxiliary Request 7

Decisions cited:

Catchword:

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Case Number: T 1894/11 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 26 November 2014

Appellant III: (Patent Proprietor)	THE PROCTER & GAMBLE COMPANY One Procter & Gamble Plaza Cincinnati, OH 45202 (US)
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Appellant II: (Opponent 01)	Henkel AG & Co. KGaA Henkelstrasse 67 40589 Düsseldorf (DE)
Representative:	Stevermann, Birgit Henkel AG & Co. KGaA VTP Patente 40191 Düsseldorf (DE)
Appellant I: (Opponent 02)	Reckitt Benckiser (UK) Limited Dansom Lane Hull HU8 7DS (GB)
Representative:	Hodgetts, Catherine Dawn Reckitt Benckiser Corporate Services Limited Legal Department - Patents Group Dansom Lane Hull HU8 7DS (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 6 July 2011 concerning maintenance of the European Patent No. 1578894 in amended form.**

Composition of the Board:

Chairman	B. Czech
Members:	G. Santavicca
	U. Lokys

Summary of Facts and Submissions

I. The appeals, by Opponents 01 and 02 and the Patent Proprietor, lie from the interlocutory decision of the opposition division concerning maintenance of European patent 1 578 894 in amended form.

II. Independent Claims 1, 6, 7 and 10 according to the First Auxiliary Request filed at the oral proceedings held on 9 June 2011 and held allowable by the Opposition Division read as follows (amendments to the respective claims as granted made apparent by the Board):

"*1. A rinse aid composition for reducing glassware corrosion characterized by comprising:*
*a) from 0.01% to 70% by weight of at least one water-soluble metal salt wherein said at least one water-soluble metal salt comprises zinc, and wherein said water-soluble zinc salt is selected from the group consisting of zinc acetate, zinc chloride, zinc gluconate, ~~x~~**z**inc formate, zinc malate, zinc nitrate, zinc sulfate, and mixtures thereof;*
b) from 0.01% to 25% by weight of an acid;
c) from 0.01 % to 60% by weight of a non-ionic surfactant;
d) ~~at least one of the following: a dispersant polymer,~~ a perfume ~~and mixtures thereof; and~~
e) optionally at least one component selected from the group consisting of ~~acid, dispersant polymer, perfume,~~ hydrotrope, binder, carrier medium, antibacterial active, dye, and mixtures thereof;
wherein said rinse aid composition has a pH of less than 5 when measured at a 10% concentration in an aqueous solution;

***wherein the composition does not contain a chelating agent*."**

"~~12~~**6**. *A method of rinsing cleaned glassware characterized by comprising the step of rinsing said cleaned glassware in an automatic dishwashing machine with a rinse aid composition comprising:*
*a) from 0.01% to 70% by weight of at least one water-soluble metal salt wherein said at least one water-soluble metal salt comprises zinc, and wherein said water-soluble zinc salt is selected from the group consisting of zinc acetate, zinc chloride, zinc gluconate, ~~x~~**z**inc formate, zinc malate, zinc nitrate, zinc sulfate, and mixtures thereof;*
*b) from ~~1.01~~ **0.01**% to 25% by weight of an acid;*
c) from 0.01% to 60% by weight of a non-ionic surfactant;
d) ~~at least one of the following: a dispersant polymer,~~ a perfume~~, and mixtures thereof; and~~
e) optionally at least one component selected from the group consisting of ~~acid, dispersant polymer, perfume,~~ hydrotrope, binder, carrier medium, antibacterial active, dye, and mixtures thereof;
wherein said rinse aid composition has a pH of less than 5 when measured at a 10% concentration in an aqueous solution;
wherein the composition does not contain a chelating agent."

"~~13~~**7**. *A method of reducing glassware corrosion and film formation in an automatic dishwashing process, wherein said method is characterized by comprising the step of rinsing cleaned glassware with a rinse aid composition comprising:*
a) from 0.01% to 70% by weight of at least one water-soluble metal salt wherein said at least one water-soluble metal salt comprises zinc, and wherein said

*water-soluble zinc salt is selected from the group consisting of zinc acetate, zinc chloride, zinc gluconate, ~~x~~**z***inc formate, zinc malate, zinc nitrate, zinc sulfate, and mixtures thereof;*
b) from 0.01% to 25% by weight of an acid;
c) from 0.01% to 60% by weight of a non-ionic surfactant;
d) at least one component selected from the group consisting of ~~acid~~ hydrotrope, binder, ~~dispersant polymer,~~perfume, carrier medium, antibacterial active, dye, and mixtures thereof;
wherein said rinse aid composition has a pH of less than 5 when measured at a 10% concentration in an aqueous solution~~, and wherein said composition~~;
wherein said composition does not contain a chelating agent."

"~~16~~**10**. *A kit reducing glassware corrosion and film formation in an automatic dishwashing process characterized by comprising: (a) a package, (b) instructions for use, and (c) a rinse aid composition suitable for use in automatic dishwashing comprising (i) a water-soluble metal salt wherein said at least one water-soluble metal salt comprises zinc, and wherein said water-soluble zinc salt is selected from the group consisting of zinc acetate, zinc chloride, zinc gluconate, ~~x~~**z***inc [sic] formate, zinc malate, zinc nitrate, zinc sulfate, and mixtures thereof; (ii) an acid; (iii) a non-ionic surfactant; (iv) ~~at~~* [sic] *least one of the following: ~~a dispersant polymer,~~ a perfume~~, and mixtures thereof~~ [sic]; and (v) optionally at least one component selected from the group consisting of hydrotrope, binder, carrier medium, antibacterial active, dye, and mixtures thereof;*
wherein the composition does not contain a chelating agent.".

III. The patent had been opposed in its entirety on the grounds of lack of novelty and inventive step.

The items of evidence relied upon by the opponents include the following:

D2: H. G. Hauthal and G. Wagner, "*Reinigungs- und Pflegemittel im Haushalt; Chemie, Anwendung, Ökologie und Verbrauchersicherheit*", Verlag für Chemische Industrie, 2003, Page 166;

D4: EP 0 070 587 A1;

D5: US 4,416,794 A;

D8: WO 03/104367 A1;

D9: US 5,545,346 A;

D10: DE 43 16 744 A1;

D11: US 5,545,352 A;

D12: WO 00/08125 A1;

D13: US 6,210,600 B1;

D14: DE 100 32 612 A1;

D15: EP 0 383 480 A1; and an

Experimental Report of Opponent 02 dated 9 May 2011.

IV. In the decision under appeal, the Opposition Division came to the following conclusions:

a) The claims of the then pending First Auxiliary Request (see II *supra*) were not objectionable under Articles 84 and 123(2),(3) EPC.

b) Their subject-matter was novel, and also inventive, starting from D4 as the closest prior art and considering also the disclosure of D2, D5, D9, D11, D12 and D14.

V. In its statement setting out the grounds of appeal, Appellant I (Opponent 02 hereinafter) submitted that independent Claims 1, 6, 7 and 10 held allowable by the Opposition Division lacked clarity and contained added

matter. The claimed subject-matter lacked an inventive step in the light of the closest prior art D4 and combinations thereof with any of D9, D12, D13, D14 or D15.

VI. In its statement setting out the grounds of appeal, Appellant II (Opponent 01 hereinafter) submitted that the the claims held allowable by the Opposition Division were objectionable under Article 123(2) EPC, and that their subject-matter lacked an inventive step over D4, as the closest prior art, combined with any of D8 and/or D14.

VII. With its statement setting out the grounds of appeal, Appellant III (Proprietor hereinafter) submitted seven sets of claims as new Main Request and as First to Sixth Auxiliary Requests.

Said new Main Request comprises the claims as granted with the exception of Claim 16, deleted. Moreover, "***x****inc formate*" was replaced with "***z****inc formate*" in Claims 1, 12 and 13; "***1****.01%*" with "***0****.01%*" in feature b) of Claim 12; and the expression "*and wherein said composition*" at the very end of Claim 13 was deleted.

The First Auxiliary Request differs from the Main Request in that Claim 13 of the latter was also deleted and the remaining claims renumbered.

The Second Auxiliary Request differs from the First Auxiliary Request in that claim 5 of the latter was also deleted and in that the pH range defined in the independent Claims 1 and 11 (renumbered) was amended to read "*a pH of* ***1 to 3*** ~~*less than 5*~~".

The Third Auxiliary Request differs from the Main Request in that the non-ionic surfactant of feature b) of Claims 1 and 13 is additionally qualified as "*low-foaming*".

The Fourth Auxiliary Request differs from the Third Auxiliary Request in that Claim 13 according to the former is deleted, the subsequent claims being renumbered.

The Fifth Auxiliary Request differs from the Fourth Auxiliary Request in that claim 5 of the latter was also deleted and in that the pH range defined in the independent Claims 1 and 11 (renumbered) was amended to read "*a pH of* ***1 to 3*** ~~*less than 5*~~".

The Sixth Auxiliary Request is identical to the Main Request dealt with in the decision under appeal, i.e. corresponds to the claims as granted without Claim 4, deleted, and all independent Claims 1, 11, 12 and 15 additionally contain the appended feature "***wherein the/ said composition does not contain a chelating agent***".

VIII. In its reply of 23 February 2012, Opponent 01 held that the appeal of the Patent Proprietor was not admissible.

IX. In its reply to the statements of grounds of the two adverse parties, Appellant III (Patent Proprietor) announced as its Seventh Auxiliary Request that the patent be maintained in the same form as approved by the Opposition Division, and rebutted the objections raised by the adverse parties.

In a further letter dated 11 June 2012, the Patent Proprietor also rebutted the objection raised regarding the admissibility of its appeal.

X. In its letter dated 24 October 2014, Opponent 01 submitted that if its request to reject the appeal as inadmissible were not allowed, the Main and First to Sixth Auxiliary Requests of Appellant III should not be admitted pursuant to Article 12(4) RPBA.

XI. In its letter dated 19 November 2014, Opponent 02, submitting additional arguments, also held that the Main and First to Fifth Auxiliary Requests on file should not be admitted pursuant to Article 12(4) RPBA.

XII. Oral proceedings were held on 26 November 2014.

The request for rejection of the appeal by the Patent Proprietor as inadmissible was not upheld.

The request that the Proprietor's Main and First to Fifth Auxiliary Requests be held inadmissible was however upheld.

The issues then addressed include:
- admissibility of Main Request and First to Fifth Auxiliary Requests;
- allowability of the subject-matter claimed according to said requests as regards inventive step over D4; and,
- clarity of the claims according to the Sixth Auxiliary Request.

In reaction to the reservations expressed by the Board regarding this last issue, the Patent Proprietor submitted a further set of claims as Auxiliary Request 6**A**, differing from the one according to the Sixth Auxiliary Request in that Claims 6 to 9 of the latter were cancelled and the subsequent claims renumbered.

The admissibility of this new claim request was then addressed.
Finally, the issues of added-subject-matter, clarity and inventive step in respect of the Seventh Auxiliary Request (claims held allowable by the Opposition Division, see II *supra*) were dealt with.

XIII. Appellants I and II (Opponents 02 and 01) requested that the decision under appeal be set aside and that the European patent No. 1 578 894 be revoked.

Appellant III (Patent Proprietor) requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the claims according to the Main Request or one of the Auxiliary requests 1 to 6, all these requests submitted with the statement setting out the grounds of appeal, or according to the Auxiliary Request 6A submitted during oral proceedings or that the appeals of Appellants I and II be dismissed.

XIV. The arguments of the Appellants I and II (opponents) of relevance here can be summarised as follows:

Admissibility of the Main and First to Fifth Auxiliary Requests

The filing of the Main and First to Fifth Auxiliary Requests at issue with the Proprietor's statement of grounds was objectionable on various grounds. They contained independent claims as granted although the independent claims as granted had no longer been defended in opposition proceedings. The new claim requests also lacked convergence. Furthermore, clarity of the feature "*low-foaming*" (Third and Fifth Auxiliary Requests) was questionable under Article 84 EPC.

Consequently, the Main and First to Fifth Auxiliary Requests should not be admitted under Article 12(4) RPBA or Article 84 EPC.

Experimental report concerning the rinse aid compositions of D4

The experimental report annexed to the statement setting out the grounds of appeal of Opponent 02 had not been resubmitted to maintain an objection of lack of novelty based on the direct and unambiguous disclosure of the compositions used in experiments 13 and 14 of D4. It was not contested that it might theoretically be possible to adding something ("miscellaneous") capable to raise the pH above 5. This was not the point. D4 disclosed (Page 6, last paragraph, was referred to) how the balance to nonionics and chelating agents in its rinse aid compositions was made up, and there was no disclosure of alkaline ingredients, which could raise the pH. Hence, it was implicit in D4 that a miscellaneous ingredient could only be something like perfumes, whilst the citric acid monohydrate used was strongly acidic, so that the pH would be less than 5. The mention of a pH close to neutral in D4 concerned the prior art and related to the pH in the rinse cycle, in which the rinse aid composition was used, not the pH of the rinse aid composition. Even if citric acid were in deprotonated form, it would act as an acidifying agent, which fact was well known, e.g. from D13 (Claim 4 was referred to). In any case, also in the pH range of 1 to 5 citric acid acidified and chelated metal ions, as it was partially deprotonated. There was no evidence that in the compositions of D4 the citric acid had to be in the deprotonated form. D4 did not disclose a need to raise the pH to achieve a chelating effect. This was also common general knowledge.

Main Request and First to Fifth Auxiliary Requests - Inventive step - Claims 1

The experimental report proved that the compositions used in Experiments 13 and 14 of D4 had a pH (defined according to the patent) in the range from 1 to 3, so that the only distinction between the claimed subject-matter (Main Request and First to Fifth Auxiliary Requests) and that of D4 would be the presence of a perfume. Hence, a perfumed composition as claimed was obvious as found in the decision under appeal.

Sixth Auxiliary Request

Whilst Claim 1 according to the Sixth Auxiliary Request required that chelating agents be absent, Claim 6 concerned polyacrylates as the dispersant agents, which however were also chelating agents (D10, Page 2, lines 32-33, was referred to), otherwise they could not disperse metal ions. The patent specification did not disclose dispersant agents not being chelating agents. Therefore, the set of claims according to the Sixth Auxiliary Request contained an internal contradiction, and was not allowable for lack of clarity (Article 84 EPC), as also found in the decision under appeal.

Auxiliary Request 6A

Auxiliary Request 6A was filed too late. It could and should have been filed much earlier since the decision under appeal had clearly found that there was a contradiction between Claims 1 and 6 of the then pending Main Request. Also, the amendments made did not straightforwardly overcome the pending objection, as questions remained e.g. in respect of which dispersant

polymers were not also chelating agents, if any. Thus, Auxiliary Request 6A should not be admitted.

Seventh Auxiliary Request

The combination of features defined in Claim 1 of the Seventh Auxiliary Request was not disclosed as such originally. Claim 1 of the application as filed defined the presence of a water-soluble metal salt in combination with dispersant polymer, or a perfume, or a mixture thereof. Now, instead, the water-soluble metal salt was selected among defined zinc salts, (only) a perfume was present, whilst no chelating agent was present. Hence, Claim 1 resulted from a selection of zinc from the list in Claim 3 of the application as filed, the zinc salts in Claim 4 thereof, in combination with the selection of the perfume component from the list in feature d) of Claim 1 thereof. However, there were no pointers in the application as filed for these selections. In particular, the original description on page 2 mentioned the absence of chelating agent, not however the presence of zinc or of a perfume. Dispersants were originally disclosed as a component but were were no longer a feature of Claim 1. Therefore, the claims of the Seventh Auxiliary Request did not comply with Article 123(2) EPC.

As regards Article 84 EPC, reference was made to the written arguments. It was not clear either whether the examples fell under Claim 1, as the nature of e.g. the acids (possibly also chelants) used was not specified. Nor was it disclosed whether the chelating agent used in Composition E, having a pH of 1.9, was an acid. However, 5% by weight of zinc chloride might not be held responsible for decreasing the pH to 1.9.

Inventive step

As regards Claim 1, the closest prior art was D4, in particular the compositions used in Experiments 13 and 14 thereof. The rinse aid composition of Claim 1 at issue differed from the rinse aid composition of D4 only in that it contained a perfume but no chelating agent.

It was not in dispute that the presence of a perfume was merely for giving a pleasant smell, which had no relation with the other features. Hence, the first distinction did not deserve any further discussion, as acknowledged in the decision under appeal. Regarding the absence of a chelating agent, it had to be considered that the rinse aid composition of Claim 1 had a pH of less than 5 in the absence of any chelating agents, whilst the rinse aid compositions of experiments 13 and 14 of D4 comprised a chelating agent which was also an acid, namely citric acid. No particular effect could be associated to the replacement of citric acid as chelating agent with another non-chelating acid, apart from a corresponding loss of chelating activity. The examples in the patent in suit did not show any particular effect either. As regards the filming effect, Composition E had not been shown to be better than the compositions of D4, which already solved the problem of preventing glassware corrosion by the chelating agent, as apparent from the results in the table on page 8. Furthermore, since the patent itself required "*non-precipitating acids*" (reference was made to paragraph [0022]), and since it was plausible that not all of the acids falling under Claim 1 were non-precipitating, it was contested that the effect mentioned by the Patent Proprietor, namely the elimination of the precipitation of zinc, was achieved across the whole scope of Claim 1

at issue. The burden of proof was not discharged by the Patent Proprietor. Thus, the problem solved in the light of D4 was merely the provision of an alternative rinse aid composition.
To arrive at a rinse aid according to Claim 1 at issue, the skilled person had to take out the chelating agent and use another acid in order to keep the low pH of less than 5. D4 taught (Page 3, lines 14 and 24, was referred to) that the chelating agent could be 0% by weight, i.e. absent. Although a chelating agent was normally used in rinse aid compositions, to permit its use also with hard water, it could also be removed from the rinse aid composition, which would still be working under some conditions such as with soft water. On the other hand, if all known rinse aid compositions contained a chelating agent to provide a proper rinse also with hard water, then the claimed rinse aid composition was a disadvantageous alternative. As it was known that citric acid had a dual function (chelating agent/pH adjustment), once the decision not to use a chelating agent was made, as taught in D4, it would be obvious to replace citric acid with another non-chelating acid. In fact, it was known (e.g. from D10, page 2, lines 17-18) that rinse aid compositions were acidic, i.e. contained acidifying agents, in order to neutralise the alkaline residues of the previous washes. Similarly known (D14, page 10, paragraph [0079], and D9, column 3, line 40, were referred to) was the fact that the pH might be adjusted by means of known acidifying agents other than citric acid. The "close to neutral pH" mentioned in D4, and invoked by the Patent Proprietor, was the pH of the rinse liquor, not of the acidic rinse aid composition. Hence, the composition of Claim 1 at issue was obvious over D4, possibly combined with any of D8, D9, D12, D13, D14 and D15.

XV. The arguments of the Patent proprietor (Appellant III) of relevance here can be summarised as follows:

Admissibility of the Main and First to Sixth Auxiliary Requests

Although the appeal by the Patent Proprietor had been filed about 3 years ago, the opponents had raised their objections on the admissibility on procedural issues shortly before the oral proceedings only recently. The Patent Proprietor came to know the objections just before the oral proceedings, and was thus deprived of a possibility to react. These objections should thus be disregarded.

Experimental report concerning the rinse aid compositions of D4

D4 (Page 7) described a "RAI" composition including a "water & miscellaneous" component. The mention "& miscellaneous" implied that something else other than water was present, but not disclosed. It was apparent that "miscellaneous" ingredients could represent quite a lot of the 56% by weight mentioned for the "water & miscellaneous" component. Hence, it could not be directly and unambiguously derived from D4 that the pH of the RAI composition was less than 5 as defined in Claim 1 at issue. In Experiments 13 and 14 of D4 the amount of citric acid had been reduced from 10 to 20% and 5% by weight of zinc chloride had been added to the RAI composition, but it was not apparent whether and how much of the amounts of water and/or the "miscellaneous" ingredients had been replaced. The only mention of a pH in D4 was that of a "close to neutral pH". This mention was in line with the known fact that when citric acid was used as a chelating agent, in order to chelate, it was to be in deprotonated form,

i.e. as far as possible in the citrate form. It was thus irrelevant that D4 did not mention alkaline ingredients as the balance. Even if it were accepted that some citric acid might be deprotonated across the entire pH range, and that citric acid was also used for acidifying, citric acid as chelating agent worked better at higher pH. Therefore, the experimental report of Appellant I was not a repetition of the examples of D4, nor evidence that the pH was less than 5, let alone in the range from 1 to 3, as defined in the claims at issue.

Main Request and First to Fifth Auxiliary Requests - Inventive step - Claims 1

If the Board were to accept that the experimental report proved a pH of less than 5, or even in the range of from 1 to 3, for the compositions of Experiments 13 and 14 of D4, which would imply that the only distinction between the compositions of Claim 1 at issue and those of D4 was the presence of a perfume, then reference would be made to the arguments submitted in writing.

Sixth Auxiliary Request

The claimed subject-matter, dealt with in the decision under appeal, concerned rinse aid compositions comprising chelating agents and dispersant polymers (Claim 1), whereby the dispersant polymers (at least some of them) were not necessarily chelating agents (i.e. substances chelating under the most normal conditions of use of rinse aid compositions) under the conditions of Claim 1. No more precise definition of polyacrylates which were not necessarily also chelating agents could be given. Hence, no contradiction

justifying a lack of clarity arose in view of the requirements in Claims 1 and 6 to 9.

Auxiliary Request 6A

Since Claims 6 to 9 were seen as contradicting Claim 1, within the set of claims of the Sixth Auxiliary Request, which fact had become apparent only after the provisional opinion of the Board (i.e. had not been clearly understood as such from the decision under appeal), a new claim request (Auxiliary Request 6A) was filed in order to overcome the contradiction. As a matter of fact, dispersant polymers were disclosed originally, and defined in the claims as granted, together with the clearly disclosed absence of chelating agents. Hence, the objection was overcome.

Seventh Auxiliary Request

Allowability of the amendments

The absence of chelating agents in the claimed rinse aid compositions was disclosed originally as relating to the invention. Hence, it was not reasonable to state that this absence did not relate to the invention. Although the application as filed mentioned different metals, the examples confirmed that zinc salts were preferred. Claim 4 as originally filed too emphasized the role of the zinc salts. There were examples without chelating agents but including zinc salts. On a page of the application as originally filed, the dispersant polymers were disclosed as optional ingredients. As regards the reduction made in feature e) of Claim 1 as granted, which dealt with optional features, it had no bearing on Article 123(2) EPC. In any case, dispersant polymers might still be present. In Examples B and C,

the acids were not chelating agents. The skilled person knew which acids were chelating agents too, i.e. capable of chelating at normal rinse conditions. Therefore, the independent claims of the Seventh Auxiliary Request complied with Article 123(2) EPC, and were not objectionable under Article 84 EPC.

Inventive step

D4, in particular the compositions used in Experiments 13 and 14, was an appropriate starting point for assessing inventive step. In the compositions illustrated by D4, the chelating agent used was citric acid. The problem to be solved, as also stated in the patent in suit, was to provide a rinse aid composition suitable for reducing odor, spotting, filming and corrosion of glassware in automatic dishwashing. The examples of the patent in suit, in particular the comparison between Compositions B and C (not containing a chelating agent) with Composition E (containing 20% by weight nonionics and 20% by weight of chelating agent) showed that the problem had been solved. In fact, since the nonionics might, according to the patent in suit, be used in any amount (they had nothing to do with filming), the examples made plausible that the absence of chelating agents in Compositions B and C reduced the filming exhibited by Composition E (reference was made to paragraph [0079]).
If the problem solved were instead to be seen in the provision of an alternative, then the solution was the combination of an acid with a water-soluble zinc salt, which was an alternative to the general use of chelating agents. Hence, a less ambitious problem could be seen in the provision of an alternative composition capable of achieving some level of reduction of

corrosion. It had been shown in the examples of the patent in suit that this problem was plausibly solved. As regards obviousness, the opponents had alleged that it would have been obvious to take out the chelating agent from the compositions of D4, as D4 also taught 0% of chelating agent, and to replace it with another acid, in order to maintain the low pH. However, the 0 to 30% by weight of chelating agent in D4 was merely "patent language" since D4 did not actually teach that no chelating agent should be present. On the contrary, the presence of a chelating agent was preferred, as apparent from page 7, last paragraph, of D4, as well as from the teaching in D4 that if the zinc content were increased an improvement was achieved without removing citric acid. Even if it were theoretically possible to remove the chelating agent, the common general knowledge was that in the practical life a chelating agent should be present, as shown in the prior art invoked by the opponents, which always disclosed some chelating agent. Hence, there was no motivation to remove citric acid, let alone whilst maintaining a low pH as defined in Claim 1. The opponents had not shown that the skilled person had a motivation to make these two changes. Whilst the patent in suit made clear (page 2, lines 52-57, and paragraph [0020] were referred to) that a low pH was necessary for quickly dissolving the zinc salt, to prevent precipitation thereof (i.e. a low pH was essential in combination with zinc salts with the exclusion of chelating agents; this had already been mentioned in the opposition proceedings, in the letter dated 9/5/2011, page 5, last paragraph), D4 taught that citric acid was the preferred chelating agent and the pH was not mentioned, i.e. was not considered to play a role.

Moreover, whilst according to D4 the citric acid content in D4 be reduced, though not fully removed, no

compensation measure for maintaining the pH was disclosed or suggested. The statement by the opponents that all rinse aid compositions were acidic as claimed was contested. The known fact that rinse aid compositions might contain acidifying agents did not mean that their pH would necessarily be below 5 as defined in claim 1. Hence, if the chelating agent were removed from the compositions of D4, the pH of the compositions would become higher, because D4 taught that citric acid was the chelating agent. As an alternative, tartaric acid was mentioned in D4, which also was a chelating agent. Hence, D4 consistently taught that the acid had to be chelating. As regards the other documents invoked, it was not contested that organic acids were also used for acidifying, but it was contested that rinse aids containing these acids always had to have a pH of less than 5 as defined in Claim 1. Therefore, starting from D4, the composition of Claim 1 at issue was not obvious in view of the other documents invoked.

The same conclusion applied to the subject-matter of the other independent claims at issue, which also required the absence of chelating agent and the presence of acid and zinc salt in the rinse aid composition.

Reasons for the Decision

Admissibility of the appeals

1. The three appeals are admissible (Article 108 EPC).

More particularly, the appeal of the Patent Proprietor is admissible if only because in its statement of grounds, it defended a request not allowed by the

Opposition Division, i.e. the Sixth Auxiliary at issue (Main Request before the Opposition Division). This was no longer in dispute at the oral proceedings.

Main and First to Fifth Auxiliary Requests of the Appellant

2. Without prejudice to the question of whether or not the objections and arguments of the opponents, filed very late themselves and concerning the allegedly belated filing of the claim requests at issue, are admissible at all and/or permit concluding that said requests should have been filed earlier (Article 12(4) RPBA), the Board finds that said claim requests are clearly not allowable since it is immediately apparent that they are objectionable on the ground of lack of inventive step.

2.1 More particularly, taking into account the results shown in the experimental report (*infra*) and the disclosure that the non-ionic ethoxylated surfactants of D4 (see claim 1) are expressly "*low-foaming*" (*infra*), it is apparent that the compositions defined in each of the respective Claim 1 according of all these claim requests differ from the compositions used in experiments 13 and 14 described in D4 (page 9) only in that the presence of a certain amount of a perfume component is required.

2.2 In respect of the presence of a perfume as the only distinguishing feature of the claimed subject-matter over D4, the Opponents have maintained that, since no effect whatsoever had ever been shown, the perfume was present in the composition only to provide a better smelling product, hence that the conclusion therefor in the decision under appeal was correct (see statement of grounds of appeal of Appellant I, page 7).

Questioned by the Board during the oral proceedings, Appellant III (Patent Proprietor), in this respect, referred to its written arguments, which, however, merely stress on a further alleged difference over D4, i.e. the pH value of less than 5 (see the letter dated 2 April 2012, Page 5, Fourth full paragraph ff).

2.3 Since the patent in suit (paragraph [0053]) merely requires the presence of any suitable perfume in any suitable amount in order to improve odor profiles (i.e. nothing more than the known function of a perfume), and since it is not in dispute that the addition of an appropriate amount of a perfume component to a rinsing aid composition in order to improve the smell thereof is an obvious measure, the compositions according to the respective claims 1 of the Main Request and of the First to Fifth the Auxiliary Requests do not involve an inventive step (Articles 52(1) and 56 EPC).

2.4 The Appellant's Main and First to Fifth Auxiliary requests are thus not allowable.

Sixth Auxiliary Request

Admissibility

3. There is no question that the amended set of claims according to the Sixth Auxiliary Request filed with the statement of grounds of the Patent Proprietor is admissible since it identical to the set of claims according to the Main Request dealt with in the decision under appeal.

Allowability of the amendments

4. Compared to Claim 1 of the patent as granted, Claim 1 of the Sixth Auxiliary Request contains the additional proviso "*wherein the composition does not contain a chelating agent*".

4.1 During the oral proceedings before the Board, it was considered that this proviso could be interpreted in a technically sensible way in the sense that it did not only exclude the presence of compounds effectively acting as a chelating agents under the conditions of using a composition according to Claim 1 as rinse aid in an automatic dishwashing process, but actually excluded all organic compounds capable of forming coordination bonds with metals through two or more of their atoms, i.e. bi- and multidentate ligands.

4.2 Claims 6 to 9 of the Sixth Auxiliary Request depend *inter alia* on Claim 1 but define polyacrylate (co)polymers to be used as "*dispersant polymer*".

However, these polyacrylate (co)polymers (see the Formula in Claim 7) comprise a number of (substituted) carboxylic groups, i.e. groups capable of forming coordinate bonds with metals and thus having chelating properties. D10 (see e.g. page 2, lines 32-33: "Komplexiermittel") illustrates that this was generally known, as also acknowledged in the decision under appeal (point 2.2 of the reasons).

4.3 It follows from the foregoing that there is an internal contradiction between Claims 1 and 6-9 according to the Sixth Auxiliary Request. Whereas claim 1 excludes the presence of a chelating agent, claims 6 to 9 are directed to compositions comprising dispersant polymers that are also chelating agents.

4.4 Therefore, in the Board's judgment, the set of claims at issue lacks clarity (Article 84 EPC).

4.5 Consequently, the Sixth Auxiliary Request is not allowable.

Admissibility of Auxiliary Request 6A

5. Auxiliary Request 6A was only filed at the oral proceedings, in reaction to the reservations expressed by the Board concerning the clarity of the claims according to the Sixth Auxiliary Request (*supra*).

5.1 Auxiliary Request 6A differs from the Sixth Auxiliary Request in that Claims 6 to 9 of the latter, which concerned polyacrylate dispersant polymers held to be chelating agents too (*supra*), are deleted.

5.2 However, according to one alternative, Claim 1 at issue is still directed to a composition comprising a dispersant polymer but not comprising any chelating agent.

5.3 The appellant held that Claim 1 itself clearly excluded dispersants which were also chelating agents.

The opponents however maintained that the question of which dispersant polymers were not also chelating agents, if any, still needed to be answered in order to permit the assessment of whether or not Claim 1 was contradictory in itself, i.e. clear or not clear. Moreover, questions also arose as to which of the originally disclosed dispersant polymers were not chelating agents, if any.

5.4 This question relating to clarity had already been touched upon in the first instance proceedings (see e.g. the minutes of the oral proceedings on 9 June 2011, page 1, "Discussion of Main Request ... Clarity"). Until the oral proceedings before the Board, the question of whether the deletion of Claims 6 to 9 would remedy the lack of clarity invoked, had not, however, been dealt with in detail. It could not, however, be answered without the consultation of appropriate evidence not available at the oral proceedings.

The Board thus concluded that a request of this type could and should have been filed earlier in the proceedings. No convincing reason was put forward in justification of this very late filing of the request at issue.

5.5 Therefore, the Board decided not to admit Auxiliary Request 6A into the proceedings (Article 114(2) EPC and Article 13(1),(3) RPBA).

Seventh Auxiliary Request

Allowability of the amendments

6. The claims according to the Seventh Auxiliary Request are identical to the claims according to the First Auxiliary Request held allowable by the Opposition Division in the decision under appeal.

As regards the issue of the allowability of the amendments, the Board has no reason to deviate from the findings in the decision under appeal for the following reasons:

6.1 Claim 1 of the Seventh Auxiliary Request, apart from the very last feature "*wherein the composition does not contain a chelating agent*", is fairly based on the combination of Claims 1, 3 and 4 of the application as filed (reference being made to the published document WO 2004/061068 A1), considering that Claim 4 refers back to Claims 3 and 1 and Claim 3 refers back to Claim 1, i.e. both Claims 3 and 4 refer back to Claim 1.

6.2 The deletion of the expressions "*dispersant polymer*" and "*mixtures thereof*" from feature (d) of Claim 1 of the application as filed amounts to retaining one of the possible options defined there taking into account the wording "*at least one of the following*" of feature d).

6.3 The exclusion of chelating agents is directly and unambiguously disclosed on Page 2, first full paragraph, first clause ("*It is surprisingly found that a pH below about 5 and without the use of chelating agent*"), which, for the Board, unambiguously and generally concerns the invention described and defined subsequently in the application as filed.

6.4 The above considerations apply analogously to independent Claims 6, 7 and 10, corresponding to Claims 14, 15 and 18 of the application as filed.

6.4.1 The lower limit of 0.001% for the amount of acid in Claim 6 at issue, replacing the value of 1.01% present in Claim 12 as granted, is not objectionable since it merely removes a typographical error which was not present in the approved Druckexemplar.

6.4.2 Claim 7 at issue, objected to by Opponent 02 because it does not necessarily require a a perfume component (see

feature d) concerns a method of reducing corrosion and film formation in an automatic dishwashing process. However, according to corresponding Claim 15 of the application as filed, on which Claim 7 at issue is fairly based, perfume was likewise only listed as an optional component The description of the application as filed (clause bridging pages 3 and 4) also confirms that the perfume component is not necessary for the desired filming performance.

6.5 As regards dependent Claims 2, 3, 4, 5, 8 and 9, they are, respectively, fairly based on dependent Claims 2, 5, 7, 13, 16 and 17 of the application as filed.

6.6 Therefore, in the Board's judgement, the claims of the Seventh Auxiliary Request meet the requirements of Article 123(2) EPC.

6.7 As concerns the clarity objections raised by Opponent 02 in its statement of grounds (Point 3 thereof), the Board considers that the invoked internal contradiction arising from the presence of an acid and the absence of a chelating agent is not convincing for the following reasons.

The patent in suit (paragraph [0019]) mentions not only organic acids which are also chelating agents (e.g. citric acid) but also strong inorganic acids such as hydrochloric acid. Also, it has not been shown or argued that all organic acids are chelating. As regards the examples in the patent in suit (Table of Paragraph [0076]), the data row relating to the acid component was clearly distinguished from the one relating to the chelating agent, i.e. the acids were not chelating agents whilst the chelating agent might be acidic. This was confirmed by the Patent Proprietor, e.g. for

Examples B and C.

The Board thus accepts that the claims at issue are clear (Article 84 EPC).

Novelty

7. Novelty is not in dispute. The board sees no reasons either for calling novelty into question.

Inventive step

The invention

8. The invention concerns a rinse aid composition for reducing glassware corrosion, a method of rinsing cleaned glassware, a method of reducing glassware corrosion and film formation in an automatic dishwashing process as well as a kit reducing glassware corrosion and film formation in an automatic dishwashing process (Claims 1, 6, 7 and 10; paragraph [0005]).

The rinse aid compositions according to the invention are supposed to deliver a *"better smelling product having an improved filming benefit on glassware while at the same time providing improved glassware corrosion protection without unwanted precipitation of insoluble materials on glassware"* (Paragraph [0004] of the patent in suit).

The closest prior art

9. It was common ground between the parties that the closest prior art for assessing inventive step is described in D4.

10. The disclosure of D4

10.1 D4 (Claim 1) discloses a liquid rinse aid composition for use in an automatic dishwashing machine consisting essentially of
a) from 1% to 40% by weight of a low foaming ethoxylated nonionic surfactant,
b) from 0 to 30% by weight of an organic chelating agent,
c) from 0.1% to 10% by weight of polyvalent metal ions selected from Mg^{++}, Zn^{++}, Sn^{++++}, Bi^{+++}, Sn^{++}, Ti^{+++} and mixtures thereof, said ions being present in the form of a water soluble salt thereof, and
d) a hydrotrope-water solubilising system.

10.2 According to D4 (paragraph bridging pages 5 and 6), the chelating agent
- can be any one of a wide range of organic or inorganic sequestering agents, including citric and tartaric acids, the preferred chelating acids; and,
- if included, is present in an amount of up to 30%, albeit it normally lies in the range from 5% to 20% by weight. Highly preferred compositions use from 5% to 10% by weight of chelating agent in order to minimise any attack by the chelating agent on the glassware.

10.3 Example I of D4 (page 7) *inter alia* describes a rinse aid composition identified as "RAI", comprising:
20.0% by weight of non-ionic surfactant (ethoxylated/ propoxylated alcohol);
20.0% by weight of citric acid monohydrate;
4.0% by weight of sodium cumene sulphonate; and,
56.0% by weight of "water & miscellaneous".

10.3.1 The specific rinse aid compositions used according to Experiments 13 and 14 (D4: page 9) were prepared by modifying said RAI composition by reducing the citric acid monohydrate level to 10% acid and adding, respectively, 5 or 10% by weight of $ZnCl_2$.

10.3.2 As apparent from the Table of page 9 of D4, Experiments 13 and 14, "the addition of $ZnCl_2$ in an amount greater than approximately 2% by weight causes a marked improvement in the resistance of the glass to corrosion".
According to Example 2 of D4 (page 10), System A (Product II with Rinse Aid RAI modified as in experiment 13, i.e. including 5% $ZnCl_2$) was found to prevent the corrosion of various type of glassware in automatic dishwashing.

10.4 D4 does not expressly indicate the pH of RAI and of the rinse aid compositions used in Experiments 13 and 14.

10.4.1 As apparent, however, from the experimental report submitted by Opponent 02, the pH of a diluted solution (10%) in water of a rinse aid composition comparable to that used in experiments 13 and 14 of D4, i.e. containing 9.14% by weight of citric acid, instead of 10% by weight, has a pH of 2.15 (with 5% by weight zinc chloride) and 2.08 (with 10% by weight zinc chloride), i.e. a pH of less than 3, respectively.

10.4.2 The Patent Proprietor questioned the relevance of these experimental data on the grounds that the compositions actually tested were not directly and unambiguously disclosed in D4. In particular, it held that it was not possible to gather from D4 which "miscellaneous ingredients" was/were supposed to be included in the RAI composition of D4, as no such ingredient was

specified. Hence, it simply could not be inferred from D4 that the pH of the compositions used in Experiments 13 and 14 was below 5 upon dilution as defined in Claim 1 at issue.

10.4.3 As regards the questions concerning pH values implicitly disclosed by the compositions used in Experiments 13 and 14 of D4, the Board observes the following:

- The Patent Proprietor, when questioning whether the pH of said comparative compositions complied with the criterion according to Claim 1 at issue, neither provided counter evidence, nor indicated which specific "miscellaneous" ingredient(s) could be present that would result in a pH increased beyond the maximum value imposed by Claim 1 at issue. It actually only stressed that D4 did not consider the importance of the pH.

- D4, page 6, last paragraph, discloses that "the balance of the rinse aid formulation described comprises a solubilising system which is **water**" (emphasis added by the Board), "optionally together with from 1 to 25% preferably from 2 to 20% by weight of the composition of hydrotrope which may be ethanol, isopropanol, a lower alkyl benzene sulphonate ... or a mixture of any of these".

- The compositions used in Experiments 13 and 14 of D4 are derived from the "RAI" composition which is specified (*supra*) to contain 4% by weight of sodium cumene sulphonate as the hydrotrope, in addition to citric acid, non-ionic surfactant and water.

10.4.4 Hence, the Board has no doubt that the balance of the "RAI" composition, albeit being referred to as "water **&**

miscellaneous" (emphasis added), actually amounts to water only, considering that no specific "miscellaneous" component/s is/are mentioned in connection with the compositions used in Experiments 13 and 14.

10.4.5 The composition used in said comparative compositions differs only slightly from the compositions of Examples 13 and 14 of D4 in terms of the lower amount of citric acid monohydrate (9.14 instead of 10% by weight).

For the Board, this implies that the compositions of D4, which contain more citric acid, are actually even more acidic than the tested ones. Hence, the Board is convinced that the experimental data show that the compositions used in Experiments 13 and 14 of D4 have an acidic pH falling within the pH range as defined in Claim 1 at issue.

10.5 It follows from the foregoing that the rinse aid compositions according to Claim 1 at issue do **not** differ from the rinse aid compositions of Experiments 13 and 14 of D4 in terms of their pH value.

10.6 Considering that D4, like the patent in suit, addresses glassware corrosion problems in connection with the use of automatic dishwashing rinse aids and that the rinse aid compositions used according to Experiments 13 and 14 of disclosed in D4 are similar to the ones according to the patent in suit, the Board also considers D4, and more particularly the rinse aid compositions according to Experiments 13 and 14, to constitute the closest prior art for the assessment of inventive step.

The technical problem according to the Patent Proprietor

11. In its statement setting out the grounds of appeal (page 6, second to fifth paragraphs), the Patent Proprietor argued that, compared to D4/Experiments 13 and 14, in which citric acid was used as a chelating agent, which required a basic pH to have the acid in the chelating form of citrate, the claimed composition, having a pH of less than 5 (measured as a 10% aqueous solution), solved the technical problem of providing a rinse aid composition improved in terms of the avoidance of precipitation of water-soluble zinc salt on the glassware.

12. However, at the oral proceedings, aware of the Board's reading of the closest prior D4, i.e. that the pH of less than 5 was **not** a distinction over the rinse aid compositions of Experiments 13 and 14 of D4, the Patent Proprietor reformulated the technical problem in the light of D4 in a less ambitious way, namely as the provision of an alternative rinse aid composition capable of achieving some level of reduction of glassware corrosion.

The solution

13. As the solution to this technical problem, the patent in suit proposes a rinse aid composition according to Claim 1 at issue, which is characterised in particular in that it additionally comprises "*a perfume*" and "*has a pH of less than 5 when measured at a 10% concentration in an aqueous solution*" but "*does not contain a chelating agent*".

Success of the solution

14. Considering the indications in paragraph [0003] of the patent in suit, the Board accepts as plausible that the

rinse aid composition defined in Claim 1 at issue effectively solves this less ambitious problem. This was not disputed.

Non-obviousness

15. Hence, it remains to be decided whether the claimed solution was obvious in the light of the state of the art.

15.1 D4 taken alone

15.1.1 Although D4 does not explicitly mention the possible use of a perfume in its compositions, it is not in dispute that the incorporation of a perfume component into a rinse aid composition, such as the one according to D4/Experiment 13/14 in order to impart a pleasant smell to it, is an obvious measure for the skilled person. This had already been established in the decision under appeal, which on this particular finding was not contested by the Patent Proprietor, who instead stressed the importance of the pH feature.

15.1.2 As regards, the question of whether the skilled person starting from the compositions according to D4/ Experiments 13 and 14 would envisage modifying the composition such that it no longer contained a chelating agent, it is to be noted that D4 contains several passages specifically mentioning that a chelating agent could be absent (see Claim 1, "0%"; "normally", page 3, line 24; "if included", page 6, line 4).

15.1.3 However, these passages should be considered within the context of D4 (Page 3, first paragraph), which concerns the disclosure of a solution to the problem of "the

corrosion of glass arising from treatment with a solution of a chelating agent in water of low mineral hardness and close to neutral pH, such as takes place when a conventionally formulated rinse aid is added to the final rinse stage of an ADW machine cycle". In other words, D4 deals with rinse aid compositions which "normally" contain a chelating agent, albeit in the "highly preferred" amount of 5 to 20% by weight, in order to minimise any attack by the chelating agent on the glass.

15.1.4 Thus, for the Board, although the chelating agent could be absent in the compositions of D4, the skilled person starting from D4 and seeking to reduce the corrosion of glass arising from treatment with a solution of a chelating agent in water of low mineral hardness and close to neutral pH, such as takes place when a conventionally formulated rinse aid is added to the final rinse stage of an ADW machine cycle, would rather keep the amount of chelating agent within the highly preferred range of from 5 to 20% by weight, which, in combination with more than 2% by weight of zinc salt, prevented corrosion in soft water. Consequently, the skilled person is not induced to remove the chelating agent. This finding is also in line with the undisputed practice of rinse aid manufacturers of always including a chelating agent, since they do not know the hardness of the water in which their rinse aid composition will be used.

15.1.5 If the skilled person were nevertheless to consider the possibility mentioned in D4 of formulating a rinse aid composition without chelating agent, then he would not find any hint whatsoever in D4 regarding an appropriate pH of the rinse aid composition, let alone that it should be maintained in the ranges of less than 5 as

defined in Claim 1 at issue. D4 is silent regarding appropriate pH values of the rinse aid. It simply does not consider what pH is more suitable in cases where the chelating agent disclosed in D4, and in particular citric acid, is not present. Although it is accepted that the pH of the compositions of Experiments 13 and 14 of D4 is implicitly highly acidic due to the use of citric acid and zinc chloride, there is no incitation in D4 to keep the pH so acidic in case no chelating agent is used.

15.1.6 Consequently, the two-fold choice the skilled person starting from D4/Experiment 13 or 14 had to make to arrive at a composition according to Claim 1 at issue, i.e.
- on the one hand, no to use a chelating agent, in particular citric acid, while,
- on the other hand, to still keep the very acidic pH, can only result, for the Board, from a retrospective approach. There is no motivation to act in this way.

15.2 The remaining prior art documents invoked in the appeal proceedings, D5, D9, D11, D12, D13 and D15, do not appear to comprise elements of information possibly suggesting the removal of the chelating agent from the compositions used according to Experiments 13 and 14 of D4, whilst maintaining the pH in the range defined in Claim 1 at issue, for the following reasons:

15.2.1 D5, like D4, addresses the problem of glassware corrosion by the chelating agent in soft water and proposes, as a solution thereto, a rinse aid composition *inter alia* comprising, like D4, 0 to 30% chelating agent, in combination with an amino silane. The rinse aid composition illustrated in the example of

D5 contains 17.5% by weight of citric acid, i.e. a chelating agent.

15.2.2 D8 (irrespective of whether it actually belongs to the prior art according to Article 54(2) EPC to be considered) discloses a rinse aid composition containing nonionic surfactants and an agent suitable for preventing glassware corrosion (Claim 1), such as a zinc salt (Page 14, first full paragraph), e.g. zinc acetate of Example E1. The rinse aid composition may contain an acidifying agent, which is preferably citric acid, hence a chelating agent, in an amount of 0.5 to 10% by weight (page 18, last paragraph). In essence, D8 is only concerned with the inclusion of zinc in a rinse aid composition (page 25, last paragraph). The potential role and importance of the pH is not addressed.

15.2.3 D9 concerns a rinse aid composition for preventing spot and film formation and comprising (Claim 1), addition to water and hydrotropes, nonionic surfactant and organic aminophosphonic acid or salts or complexes, whereby the pH is from 1 to 5 in a 1% solution with distilled water at 20°C. Citric acid, i.e. a chelating agent, is used as the preferred acidifying agent (column 3, line 55).

15.2.4 D10, which was invoked as evidence that polycarboxylates are chelating agents, discloses a rinse aid composition comprising, *inter alia*, a copolymer which is supposed to act as dispersant and chelating agent (page 3, line 38).

15.2.5 D11 discloses a rinse aid composition comprising a chelating agent as one of its essential components (Claim 1; Column 1, line 62).

15.2.6 D12 too discloses a rinse aid composition containing a poly(meth)acrylic acid polymer (Claim 1), which may contain other sequestrants (page 8, lines 10-14).

15.2.7 D13 deals with rinse aid compositions comprising polymers suitable to inhibit the calcium phosphate scale (Example 1; Table 1).i.e. dispersants.

15.2.8 D14 (e.g. paragraph [0243]) relates to the use of copolymers containing monomers with sulphonic-acid-groups in rinse aid compositions, as in D13, which use permitted a better cleanliness as well as a reduction of the drying time (paragraph [0012]).

15.2.9 D15, acknowledged in the patent in suit, concerns rinse additive compositions providing glassware protection from corrosion, which contain an **insoluble** inorganic zinc salt, in order to reduce reactions of dissolved species, thus the amount of precipitation (page 3, lines 46-50).

15.3 Therefore, the rinse aid compositions defined in Claim 1 at issue and consequently, the more specific ones according to dependent Claims 2 to 5, are not obvious in the light of the state of the art.

Hence, the subject-matter of these claims involves an inventive step (Articles 52(1) and 56 EPC).

16. The methods of independent Claims 6 and 7 at issue, and of Claims 8 and 9 dependent thereon, involve the use of a rinse aid composition in automatic dishwashing of glassware, said composition also comprising one or more specific water soluble zinc salts, surfactant and acid, but no chelating agent. The kit according to Claim 10

at issue also includes such a rinse aid composition.

Since the considerations under points 14 to 15 *supra* also apply to to the subject-matter of these claims, said subject-matter likewise involves an inventive step (Articles 52(1) and 56 EPC).

Conclusion

17. It follows from the foregoing that the claims according to the Seventh Auxiliary Request meet the requirements of the EPC.

Since the the patent in the amended version held allowable by the OD is not objectionable on the grounds invoked by the opponents in the appeal proceedings, the 7th auxiliary request of the Proprietor is allowable.

Order

For these reasons it is decided that:

The appeals of Appellants I and II (Opponents 02 and 01) are dismissed.

The Registrar: The Chairman:

D. Magliano B. Czech

Decision electronically authenticated