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**Datasheet for the decision
of 4 April 2006**

Case Number: T 1013/04 - 3.3.06

Application Number: 92306005.7

Publication Number: 0522766

IPC: C11D 3/37

Language of the proceedings: EN

Title of invention:

Detergent compositions in tablet form

Patentee:

UNILEVER PLC, et al

Opponents:

Henkel KGaA
The Procter & Gamble Company

Headword:

Compacted tablet/UNILEVER

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:

T 0874/97, T 0923/00

Catchword:

-



Case Number: T 1013/04 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 4 April 2006

Appellant II:
(Opponent I)

Henkel KGaA
Patente (TTP)
Henkelstrasse 67
D-40191 Düsseldorf (DE)

Appellant I:
(Opponent II)

The Procter & Gamble Company
One Procter & Gamble Plaza
Cincinnati, OH 45202 (US)

Representative:

Lawrence, Peter Robin Broughton
GILL JENNINGS & EVERY
Broadgate House
7 Eldon Street
London EC2M 7LH (GB)

Respondents:
(Patent Proprietors)

UNILEVER PLC
Unilever House
Blackfriars
London EC4P 4BQ (GB)

UNILEVER N.V.
Weena 455
NL-3013 AL Rotterdam (NL)

Representative:

Watson, Robert James
Mewburn Ellis LLP
York House
23 Kingsway
London WC2B 6HP (GB)

Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted 26 July 2004
rejecting the opposition filed against European
patent No. 0522766 pursuant to Article 102(2)
EPC.**

Composition of the Board:

Chairman: G. Rath
Members: P. Ammendola
U. Tronser

Summary of Facts and Submissions

I. This appeal is from the decision of the Opposition Division dated 26 July 2004 rejecting the oppositions against European patent No. 0 522 766.

II. This patent comprised 17 claims. Claim 1 read:

"1. A tablet of compacted particulate detergent composition comprising a detergent-active compound, a detergency builder, and optionally other detergent ingredients, characterised in that the tablet or a discrete region thereof, consist essentially of a matrix of particles no more than 5 wt% of which are smaller than $< 200\mu\text{m}$, the particles of detergent-active compound and detergent builder and optionally the particles of ingredients of the detergent base powder being individually coated with a binder material which acts as a physical disintegrant capable, when the tablet is immersed in water, of disrupting the structure of the tablet; but excluding a tablet wherein at least 90 wt% of the particles of the matrix have a particle size within a range having upper and lower limits differing from each other by not more than $700\mu\text{m}$, while not more than 5 wt% are smaller than the lower limit and not more than 5 wt% are larger than the upper limit."

Claims 2 to 17 defined preferred embodiments of the subject-matter of claim 1.

III. Two opponents had filed an opposition against this patent on the grounds of insufficiency of disclosure (Article 100(b) and 83 EPC) and lack of novelty and inventive step (Articles 100(a), 52(1), 54(2) (3) and 56 EPC). Opponent II had additionally referred to the ground of added subject-matter (Article 100(c) and 123(2) EPC).

The Opponents had cited, inter alia, the following documents:

P3 = EP-A-0 466 484,

PF = J.P. Mallee, "Tableting of Detergents" in J. Am. Oil Chem. Soc., Vol. 40, 1963, pages 621 to 624,

and

P6 = US-A-3 231 505.

IV. With decision of 19 July 2000 the Opposition Division revoked the patent for lack of novelty in view of the tablets disclosed in document PF based on the agglomerated particulate having the screen analysis pattern given in the table at page 622, left column, of this citation (hereinafter "the screen analysis data of PF").

V. This decision was appealed by the Patent Proprietors in appeal proceedings T 923/00.

In the decision ending these proceedings the Board, after having established that the subject-matter of claim 1 as granted was entitled to the priority claimed

and complied with Articles 83 and 123(2) EPC, considered the novelty objections raised by the Opponents on the basis of the disclosure of documents PF and P3, this latter document being a previous European patent application of the Patent Proprietors, only relevant under the provisions of Article 54(3) EPC. The Board found that none of these two citations anticipated the subject-matter claimed in the patent in suit and, considering that the issue of inventive step had not been discussed before the first instance, remitted the case to the Opposition Division for further prosecution.

VI. In the subsequent opposition proceedings, the Opposition Division decided to admit under the provisions of Article 114(1) EPC a **new** objection under Article 54 EPC raised by Opponent II on the basis of the disclosure of document P6. It found, however, this objection not convincing because it could not be ascertained whether or not the distribution of the particle size in the tablets of this prior art was that required in claim 1 of the patent in suit (hereinafter the particle size distribution required in claim 1, i.e. that in which the sizes of at least 90% of the particles must be spread over an interval whose extremes differ by **more than 700µm**, is briefly indicated as "**broad size distribution**", while the complementary term "**narrow size distribution**" is used hereinafter to indicate particulates wherein at least 90% of the particles have sizes differing from each other by **not more than 700µm**).

The Opposition Division found also that the detergent tablets described in document P6 (whose particle size

distribution was undisclosed) represented the most relevant prior art and that the Opponents had provided no convincing evidence contrary to the explicit statement at page 1, lines 38 to 42 of the patent in suit as to the superior disintegration properties of the subject-matter claimed vis-à-vis this prior art.

Since the use of particulates with a broad size distribution to promote the disintegration of detergent tablets was not known in the prior art, the Opposition Division found the subject-matter claimed in the patent in suit non-obvious and, thus, rejected the oppositions.

VII. Opponent II (hereinafter Appellant I) and Opponent I (hereinafter Appellant II) appealed against this decision.

Under cover of the statement setting out the grounds of its appeal, Appellant I filed a statutory declaration by David Ingram (hereinafter "document DI") containing experimental data and accompanied by the following annexes

DIA = conversion table of mesh sizes to microns,

DIB = K. Masters, "Spray Drying Handbook", Fifth Edition, 1991, pages 68, 69 and 554 to 557, and

DIC = "Appendix - Size distribution data fitted to Log normal and Rosin-Rammler distributions".

Appellant II filed with its grounds of appeal document

D8 = H. Herman de Groot *et al.*, "The Manufacture of Modern Detergent Powders", 1995, pages 185 to 189,

to which were annexed three copies, hereinafter labelled D8A to D8C, of the Rosin-Rammler curves reported at page 188 of D8 with additional lines corresponding respectively to the screen analysis data of PF and to those reported at page 9 of the patent in suit.

- VIII. The Patent Proprietors (hereinafter "Respondents") filed with their letter of 12 April 2005 six sets of amended claims labelled as first to sixth auxiliary requests.
- IX. Oral proceedings took place before the Board on 4 April 2006.
- X. The Appellants argued substantially as follows.

Only with the interpretation of claim 1 of the patent in suit given by the Board in T 923/00 had the Appellant I realised that the definition of the binder/disintegrant (hereinafter "B/D") ingredient encompassed also any conventional water soluble binder and, thus, also the sodium silicate used in the agglomeration step disclosed e.g. in example I of P6. The filing of a novelty objection based on the disclosure of this citation only after the remittal to the Opposition Division would, therefore, derive from the interpretation of the B/D-ingredient given in the immediately preceding decision of the Board. This novelty objection was not *res judicata* in T 923/00, since in the proceedings preceding this decision

document P6 had only been cited when assessing inventive step.

The skilled person would know that spray dried particulates normally have a broad size distribution which would not be substantially affected by any conventional subsequent agglomeration step and that, therefore, a narrow size distribution in an agglomerated particulate could normally only be achieved by sieving off some fractions thereof.

Since 100% of the particulate used for producing the tablet disclosed e.g. in example I of P6 would have a size ranging from 6 to 60 mesh, i.e. ranging from about 250 μm to about 3350 μm , and since this particulate had been prepared by conventional spray drying and agglomeration processes, the skilled reader of document P6 would conclude that this agglomerated particulate would necessarily have a broad size distribution and, thus, that P6 anticipated the subject-matter claimed in the patent in suit.

Documents D8 and DI should be admitted into the proceedings, since these documents allowed a more accurate interpretation of the actual disclosure contained in the citations relevant for the assessment of inventive step, i.e. documents P6 and PF. As decision T 923/00 did not consider the assessment of inventive step at all, the Appellants had the right to produce further evidence in this respect with their grounds of appeal. Nor was every single consideration of the Board mentioned in the discussion of the novelty objection based on document PF in T 923/00 necessarily binding when assessing inventive step starting from

this citation, in particular because the Board in T 923/00 could not take into consideration the additional evidence filed for the first time by the Appellants with their grounds of appeal in the present appeal proceedings.

Any of documents P6 or PF could be used as the starting point for the assessment of inventive step.

Similarly to the agglomerated particulate disclosed in document P6, also that described in PF would be a conventional spray dried particulate which had undergone a conventional agglomeration step and, thus, would necessarily have a broad size distribution. This would be confirmed by the fact that, as for the screen analysis data given at page 9 of the patent in suit, also those reported in document PF fitted with Log normal, Rosin-Rammler and Gaudin-Schuhmann graphs of particulates with broad size distribution, as reported in documents DIC and D8A to D8C.

Since it would be obvious to realize the generic teachings given in document PF using binders which were water soluble and/or had already been used as B/D-ingredient e.g. in the pharmaceutical field, the skilled person would have arrived at the tablets claimed in the patent in suit without exercising any inventive activity.

It would be erroneous to rely on the statement at page 2, lines 38 to 41 of the patent in suit (reading *"It has now been found that greatly improved disintegration and dispersion properties may also be obtained from a tablet consisting essentially of a*

matrix of compacted granules having a wider particle size range than that disclosed in EP 466 484A (Unilever) published 15 January 1992 provided that at least the particles of detergent-active compound and detergent builder are coated with binder/disintegrant before tablet compaction.") as this latter would not be consistent with the fact that the same B/D-ingredients of the patent in suit were also present in the tablets disclosed in document P3.

Moreover, the experimental data reported in document DI would demonstrate that the selection of particles with a broad size distribution was insufficient to ensure the alleged superior disintegration of the tablets claimed in the patent in suit, since the disintegration properties of a tablet depended mostly on its porosity and therefore also on the average particle size of the particulate used for producing it.

The Appellants conceded that the description of the experimental data in document DI contained some ambiguities, but argued that their results should either be accepted as a whole and, thus, as confirming the findings expressed in document DI, or be fully disregarded as lacking credibility. Instead, it would be inappropriate to consider selectively only those few data that were referred to by the Respondents as allegedly demonstrating superior disintegration properties of tablets made from agglomerated particulates with broad size distribution.

Any findings in favour of the patentability under the provisions of Article 56 EPC of the claimed tablets would necessarily be in contradiction with the

preceding findings of the Board in the case T 874/97 referring to document P3.

- XI. The Respondents refuted the Appellants' arguments and maintained that the decision of the Opposition Division to allow the introduction of the late filed novelty objection based on document P6 was doubtful, as the Board in T 923/00 had remitted the case for the assessment of inventive step only and since the disclosure of this citation was not relevant.

Moreover, it was *res judicata* that document PF would not disclose the breadth of the particle size distribution in the compacted tablet. Hence, documents D8, DI and their annexes should not be admitted into the proceedings as these citations had been late-filed. The Appellants' intention was to support an interpretation of document PF different to that already given to it by the Board in T 923/00.

The definition of the B/D-ingredient in claim 1 of the patent in suit would only encompass those binders which would actively contribute to tablet disintegration, as evident from the patent description (page 3, line 53 to page 34, line 37). Document P6 would not disclose any such B/D-ingredients meeting that definition.

Moreover, the Appellants' submissions that the agglomerated particulates disclosed in P6 would necessarily have a broad size distribution would amount to unsubstantiated allegations, insufficient for reversing the burden of proof on the Respondents' side. Indeed, these submissions were contradicted by the narrow size distribution described in document DIB

(page 555, lines 22 to 27) for a particulate obtained by spray drying, before any agglomeration. Additionally, it would be a well known fact (cited e.g. also in document P3) that an agglomeration step, such as that described in example I of document P6, could be a typical measure not only for increasing the average particle size but also for narrowing down the particle size distribution of the starting particulate.

In respect of the assessment of inventive step it would be inappropriate to start from the disclosure of document PF as this would only amount to a hypothetical example, without any teaching on how to produce an agglomerated particulate with the pattern of screen analysis data explicitly disclosed for it. Hence, the skilled person could possibly succeed in obtaining a particulate with such a particle size distribution only after extensive experimental work.

Similarly to the allegations of the Appellants in respect of the agglomerated particulate according to document P6, their statements on the necessarily broad size distribution in the hypothetical particulate whose hypothetical screen analysis data were reported in document PF also lacked any convincing supporting evidence.

The alleged - and approximate - fitting between the screen analysis data and the theoretical curves reported in documents D8A to D8C and DIC was *per se* insufficient to demonstrate that these comparisons unambiguously allowed to qualify as broad or as narrow the breadth of the particle size distribution in the hypothetical particulate. This would be evident when

considering that these theoretical curves had only been considered useful for simulating (with certain approximations) the particle size distribution e.g. in ideal spray dried particulates, but they were not recognised as providing a reliable description of the actual size distribution statistics in real particulates which have undergone further complex modifications, e.g. during an **agglomeration** process in the presence of binders.

In the table on page 7 of document DI, only the tablets of samples "A" and "F" could be identified unambiguously as formed from particulates possessing respectively a broad ("A") or a narrow ("F") size distribution. Hence, the disintegration results reported for these two samples (residue: 1.1% "A"; 5.8 "F") would confirm that the claimed tablets wherein the particulate had a broad size distribution would disperse in water more rapidly.

Since the use of particulates with a broad size distribution in order to promote the disintegration of detergent tablets was not known in the prior art, the patented subject-matter involved an inventive step also vis-à-vis the tablets with unknown - and, thus, possibly narrow - particle size distribution disclosed in example I of document P6.

The Appellants' statement that the finding of the Board in the case T 874/97 would allegedly contradict any possibility of recognising inventiveness for the subject-matter claimed in the patent in suit had to be disregarded as unsubstantiated, since the Appellants had neither filed evidence in the present appeal

proceedings nor commented in detail on the evidence and the arguments upon which the decision of T 874/97 was based.

XII. The Appellants requested that the decision of the first instance be set aside and the European patent 0 522 766 be revoked.

XIII. The Respondents requested that the appeal be dismissed or, alternatively, that the patent be maintained in amended form on the basis of any one of the first to sixth auxiliary requests as filed under cover of their letter of 12 April 2005.

Reasons for the Decision

Formal issues

1. The Board is satisfied that the novelty objection raised by Appellant I (see above point VI) on the basis of document P6 has been rightfully admitted by the Opposition Division into the opposition proceedings under the provisions of Article 114(1) EPC. The Board decides also to admit into the appeal proceedings documents D8, DI and their annexes because these documents were filed by the Appellants with the grounds of the present appeal in support of their objections under Article 56 EPC.

Since the outcome of this appeal is favourable to the Respondents, more detailed reasons need not to be given.

Interpretation of claim 1

2. The definition of the B/D-ingredient in claim 1, i.e. the wording "*binder material which acts as a physical disintegrant capable, when the tablet is immersed in water, of disrupting the structure of the tablet*" (see above point II), has been interpreted in T 923/00 as encompassing any material capable of keeping the particles together in the tablet and of enabling the disintegration of the tablet when immersed in water (see T 923/00, items 2 and 2.1).

The Board stresses additionally that the B/D-ingredient is defined in claim 1 as a binder that "*acts as physical disintegrant*" (see above point II). Hence, this definition necessarily encompasses those binders whose intrinsic properties towards water (such as swellability, solubility, deformability, etc.) favour the physical disintegration of the tablet in this medium. Moreover, the Board concurs with the Appellants that the fact that PEG (undisputedly known to be water soluble) is mentioned in the patent in suit among the preferred B/D-ingredients (see e.g. claim 6) actually confirms that binders which just dissolve in water are also encompassed by this definition.

Hence, the Board concludes that the definition of the B/D-ingredient in claim 1 encompasses, *inter alia*, the binders which are water-soluble.

Claim 1: novelty vis-à-vis P6

3. In view of the above findings, it is apparent that the definition of the B/D-ingredient given in claim 1 of

the patent in suit also embraces water soluble sodium silicates, i.e. also the compound added in example I of document P6 in the agglomeration of a finer spray-dried mixture of detergent and builder ingredients for producing an agglomerated particulate with a particle size of from 6 to 60 mesh (equivalent to from about 250 μm to about 3350 μm). Hence, the broad particle size distribution of the particulate of the presently claimed tablets is the only feature of these latter not explicitly disclosed in example I of document P6.

3.1 As resumed in detail above (see points X and XI), the parties have made opposite statements as to whether or not the skilled reader of document P6 would inevitably presume that the particles of the agglomerated particulate used in example I of this citation would also necessarily have particle sizes broadly distributed over the whole range of 6 to 60 mesh.

3.2 The Board notes that, in the absence of any explicit information in document P6 on the distribution of the particle size in the agglomerated particulate used in example I, the burden of providing evidence supporting the novelty objection based on this citation rested with the Appellants.

These latter have, however, not reproduced example I of P6 in order directly to assess the breadth of the particle size distribution of the particulate used therein. They simply alleged that any conventional spray drying process even when followed by a conventional agglomeration process, as the spray drying and the agglomeration processes used in example I of document P6, would necessarily be associated with a

broad size distribution. Accordingly, in the Appellants' opinion the skilled person would have expected that a narrowing down of the size distribution in this example of the prior art would have necessarily required additional measures undisclosed in document P6, such as e.g. the selective removal by sieving of at least some of the finer and/or coarser particles.

3.2.1 The Board notes instead that already particulates obtained by simple spray-drying may actually have a **narrow** size distribution (as undisputedly evident from the data reported at page 555 of annex DIB). Moreover, it cannot be excluded that, as alleged by the Respondents, the agglomeration step used in example I of document P6, besides increasing the average particle size, might also narrow down the particle size distribution.

3.2.2 Additionally, the Respondents have contested the Appellants' further allegations based on the graphs reported in documents DIC and D8A to D8C (see above point X) by maintaining that these theoretical curves are **not** recognised to be representative of the particle size distribution in real particulates resulting from conventional spray drying followed by conventional **agglomeration** in the presence of binders, as disclosed in P6, or in PF, or in the patent in suit.

The Board notes that from the available citations it is only apparent that some of the theoretical equations used describing these ideal curves have actually been considered as approximations of the size distributions occurring in ideal spray dried particulates (see e.g. document D8, page 187). Hence, it cannot be concluded

from the available evidence that the particle size distribution actually observable in real samples of **agglomerated** particulates might be realistically evaluated by fitting some experimentally determined screen analysis thereof with theoretical curves normally used for describing ideal **spray dried** particulates, as proposed e.g. in documents DIC and D8A to D8C.

- 3.3 Accordingly, the Board concludes that the Appellants have failed to demonstrate credibly that the agglomerated particulate used for forming the tablets disclosed in document P6 actually has the broad size distribution defined in claim 1 of the patent in suit.

Therefore, the Board finds that the subject-matter of claim 1 of the patent as granted is novel over the disclosure of document P6 and, thus, complies with the requirements of Article 54 EPC.

Claim 1: Inventive step

4. The Appellants have contested the inventiveness of the claimed subject-matter starting from either the disclosure of document PF or that of document P6.
- 4.1 The Board concurs with the Appellants that both documents PF and P6 address the same technical problem as mentioned in the patent in suit, i.e. that of rendering available a detergent tablet with excellent balance between stability upon dry handling and speed of dissolution in water (compare the patent in suit page 2, lines 15 to 19 and lines 38 to 41, with PF page 621, left column, lines 16 to 18 and right column,

lines 23 to 27, or with P6, column 1, lines 10 to 13, column 6, lines 25 to 35).

The Board observes also that similarly to the breadth of the particle size distribution in the agglomerated particulate of example I of document P6, also that of the theoretical particulate, whose screen analysis pattern is disclosed in document PF, is unknown.

4.2 However, there is a substantial difference in the technical usefulness of the disclosure of documents PF and P6.

4.2.1 While document P6 is a patent document that discloses detergent tablets by providing, in particular in the examples, detailed information on the specific ingredients to be used and on the whole preparation process, document PF is instead a technical literature text mostly focused on the analysis of the factors relevant for the tableting step, i.e. a text wherein all the steps and the ingredients used for producing the detergent particulates to be compacted are only described by means of generic teachings. In particular, the screen analysis pattern reported in PF is described as "*A typical screen analysis of what we feel is a good granulation*" (page 622, left column, lines 9 to 10) without any further information on the specific chemical composition of the material and its production method.

Therefore, the Board observes that the skilled person starting from document PF would still necessarily be confronted with the initial problem of identifying the correct ingredients as well as the correct spray drying

and agglomeration conditions required for producing such an agglomerated particulate. In other words, crucial information is apparently missing in PF.

- 4.2.2 The Board notes that the Appellants have simply alleged that an experienced practitioner would have been able to prepare an agglomerated particulate according to the teachings of document PF, but have neither attempted to reproduce such an agglomerated particulate nor referred to other evidence possibly supporting this allegation.

In the absence of supporting evidence and considering that this allegation of the Appellants has been contested by the Respondents, the Board must conclude that document PF does **not** enable its skilled reader to directly produce an agglomerated particulate with said screen analysis pattern.

- 4.2.3 The Board notes additionally that, while document P6 discloses the use of a specific B/D-ingredient in the agglomeration step of example I, document PF discloses as equally suitable any kind of binders in general:
"These agglomerates should be held lightly together by some type of binder. ..." (see PF, page 622, left column, lines 5 to 8).

- 4.2.4 Therefore, the Board concludes that document P6 deals with concrete reproducible examples of agglomerated particles, whereas document PF provides only an incomplete theoretical disclosure thereof. Moreover, the agglomerates specifically disclosed in document P6 are also structurally closer to the subject-matter of the patent in suit than that partially disclosed in document PF.

Hence, the disclosure of document P6 represents the reasonable starting point for the assessment of inventive step.

- 4.3 The patent in suit explicitly states at page 2, lines 38 to 41, that the claimed tablet, wherein the compacted particulate has a broad size distribution and a B/D-ingredient coating, displays disintegration properties superior to those of the prior art and comparable to those of the tablet claimed in P3 (which is **not** part of the prior art in view of Article 56 EPC).
- 4.4 Even if the Board could concur with the Appellants that the foregoing statement should be disregarded as logically inconsistent (see above point X), the experimental data obtained by Appellant I (see the table at page 7 of document DI) have specifically been referred to by the Respondents as evidence demonstrating that the level of disintegration achieved by the tablets claimed is to be presumed superior to that achieved by the tablets of the prior art disclosed in P6.
- 4.4.1 In this table the disintegration properties of eight tablet samples - labelled as "A" to "H" - are reported together with some data on the particle size distribution of the agglomerated particulates used in preparing each of these tablets. In particular, it gives for each sample the screen analysis obtained by using certain standard sieves, as well as a distinct value presumably indicating the particle size range of 90% of each particulate (hereinafter "the 90% range values").

4.4.2 The Board observes that document DI provides no indication as to how the 90% range values have been obtained. Nor are these latter simply derivable from the corresponding screen analysis data given for each sample. This has been admitted by the Appellants too. Hence, it is not apparent whether the 90% range values result from some undisclosed additional sieving experiments or e.g. from a theoretical evaluation of the reported screen analysis data based e.g. on any of the Log normal, Rosin-Rammler and Gaudin-Schuhmann graphs, as these statistical distribution models are also explicitly mentioned in document DI (see also Annex DIC).

In the absence of more precise information and in view of the above conclusions (see point 3.2.2) as to the lack of evidence supporting the contested validity of these theoretical curves for describing the particle size distribution in an **agglomerated** particulate, the 90% range values cannot be considered as providing reliable information and, thus, are disregarded by the Board.

4.4.3 The Board notes additionally that, as conceded by the Appellants too, the screen analysis pattern given for samples B to E, G and H could in principle be consistent with a broad as well as with a narrow size distribution.

Hence, the Board finds that the data reported for samples B to E, G and H cannot be unambiguously classified either as representative of the claimed

invention or as comparative samples and, therefore, must also be disregarded.

- 4.4.4 The Board finds instead that the screen analysis data reported for sample A are unambiguously consistent with the statement - at point 29 of the same document DI - that this sample represents the subject-matter of claim 1 of the patent in suit.

Similarly, the screen analysis data reported for sample F are consistent with the statements at point 30 of this document qualifying this sample as a comparative one obtained from a particulate with a narrow size distribution.

Accordingly, the Board concurs with the Respondents that among the data reported in the table at page 7 of document DI only those relative to samples A and F may be compared.

- 4.4.5 The Appellants have argued however, that if some of the data contained in the table of document DI were to be found ambiguous then all the data reported therein would lack any credibility and, thus, one could not rely only on a part of the table in document DI and disregard the rest.

The Board finds instead that the data reported in the table of DI that are univocal do represent credible evidence and, thus, cannot be ignored. The fact that other data in the same table are instead ambiguous has no bearing on this finding.

4.4.6 The Board notes that the disintegration properties of sample A representing the claimed invention are superior to those of the comparative sample F. Hence, the Board concludes that the comparison among the experimental data obtained by the Appellants confirms that the disintegration properties of the claimed tablets are superior to those of tablets based on a particulate with a narrow particle size distribution.

4.5 Since the size distribution of the agglomerated particulate used in example I of document P6 (see above point 3.3) is unknown, its disintegration properties are also unknown. Hence, the Board has no reason for doubting that the tablets claimed in the patent in suit may have superior disintegration properties also vis-à-vis the prior art disclosed in document P6.

Accordingly, the Board concludes that the technical problem credibly solved by the subject-matter of claim 1 of the patent in suit vis-à-vis the disclosure of document P6 is that of providing compacted detergent tablets with improved disintegration properties.

4.6 This problem has been solved in the claimed tablets by using a particulate with a broad size distribution.

Hence, the assessment of inventive step boils down to establishing whether or not the skilled person would find in the prior art any suggestion that a broad size distribution of the compacted particulate might be beneficial to the speed of disintegration of detergent tablets in water.

4.7 The Board observes that the available citations contain no such suggestion. This has not even been disputed by the Appellants.

Hence, the Board concludes that the skilled person starting from the prior art disclosed in document P6 would have no reason for expecting that the problem posed could be solved by replacing the agglomerated particulate of unknown particle size distribution used in example I of this citation, by a similarly agglomerated particulate whose particle size distribution was broad.

Therefore, the tablet of claim 1 of the patent in suit provides a non-obvious solution to the existing technical problem.

4.8 The Board wishes to underline that the Appellants' allegation that this finding would be in contradiction with that in T 874/97 has not been accompanied by any filing of evidence in the present appeal proceedings and not been expressed with any detailed reasoning. Thus, it is disregarded by the Board as an unsubstantiated objection.

The Board finds it appropriate, however, to draw the attention of the Appellants to the fact that in T 874/97 the prior art considered most relevant in the assessment of inventive step is different from that disclosed in documents PF or P6.

4.9 For all the above reasons the Board concludes that the subject-matter of claim 1 of the patent in suit is based on an inventive step and, hence, complies with the requirements of Article 56 EPC.

Novelty and inventive step for the subject-matter of claims 2 to 17

5. These claims refer to particular embodiments of the tablet of claim 1 on which they depend and, thus, the Board finds that their subject-matter is novel and based on an inventive step for the same reasons indicated above.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar:

The Chairman:

G. Rauh

G. Raths