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**Datasheet for the decision
of 28 September 2021**

Case Number: T 1574/17 - 3.3.04

Application Number: 12189587.4

Publication Number: 2612551

IPC: A01K67/033, A01N63/00,
A01N35/02

Language of the proceedings: EN

Title of invention:

Mite composition comprising a predatory mite and immobilized prey contacted with a fungus reducing agent and methods and uses related to the use of said composition

Patent Proprietor:

Koppert B.V.

Opponents:

- (1): Katz Biotech AG
EWH BioProduction Aps
BIOTUS OY
MIP SYSTEM AGRO SL
- (2): IN VIVO AGROSOLUTIONS
- (3): Agrobio S.L.b (opposition withdrawn)

Headword:

Mite compositions /KOPPERT

Relevant legal provisions:

EPC Art. 54(2), 56, 115

Keyword:

Main request - novelty (yes), inventive step (yes)

Third party observations - not admitted

Decisions cited:

J 0007/83, T 0951/91, T 0179/03



Beschwerdekammern

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Case Number: T 1574/17 - 3.3.04

D E C I S I O N
of Technical Board of Appeal 3.3.04
of 28 September 2021

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 12 June 2017
revoking European patent No. 2612551 pursuant to
Article 101(3)(b) EPC.**

Composition of the Board:

Chair B. Claes
Members: R. Morawetz
 F. Bostedt

Summary of Facts and Submissions

- I. The appeal of the patent proprietor (appellant) lies from the opposition division's decision revoking European patent No. 2 612 551 ("the patent"), entitled *"Mite composition comprising a predatory mite and immobilized prey contacted with a fungus reducing agent and methods and uses related to the use of said composition"*.
- II. The patent was granted for European patent application No. 12 189 587.4 with a filing date of 23 October 2012 and claims priority from US patent application No. 201261583152, filed on 4 January 2012.
- III. Three oppositions were filed against the patent. The opposition proceedings were based on the grounds in Article 100(a) EPC, in relation to novelty (Article 54 EPC) and inventive step (Article 56 EPC), and in Article 100(b) EPC. The joint opponent (opponent 1) and opponents 2 and 3 are respondents I, II and III, respectively, in the appeal proceedings.
- IV. The following documents are referred to in this decision:
- D1 WO 2008/104807
- D3 Matsumoto K. et al., Recent advances in Acarology (1979), vol. 1, 243-249
- D4 Leal W.S. et al., Agric. Biol. Chem. (1988), vol. 52, 1299-1300
- D5 Okabe K. and O'Connor B.M., Experimental

and Applied Acarology (2001). vol. 25,
493-504

- D6 Leal W.S. et al., Agric. Biol. Chem. (1989),
vol. 53, 2703-2709
- D7 Schulz S. et al., ChemBioChem (2004), vol. 5,
1500-1507
- D8 Chmielewski W., Fagopyrum (1999), vol. 16,
95-97
- D9 WO 2007/075081 A1
- D10 WO 2008/015393 A2
- D11 WO 2006/057552 A1
- D12 WO 2006/071107 A1
- D15 EP 2 380 436 A1
- D16 Okamoto M. et al., Japanese Journal of Sanitary
Zoology (1978), vol. 29, 255-260
- D17 Hubert J. et al., Pedobiologia (2004), vol. 48,
205-214
- D27 Collins D.A., Exp Appl Acarol (2012), vol. 56,
191-208
- D31 Kuwahara Y. et al., Naturwissenschaften (1989),
vol. 76, 578-579
- D33 Griffiths D.A. et al., Journal of Economic
Entomology (1969), vol. 52, 514-518

- D57 Report of mite rearing experiments, filed as Annex II on 17 May 2016
- D65 Report of experiments, filed on 16 January 2017
- D68 McMurtry J.A. et al., Systematic & Applied Acarology (2013), vol. 18, 297-320
- D69 Duso C. et al., Zoosymposia (2011), vol. 6, 124-130
- D79 Sánchez-Ramos I. et al., Exp Appl Acaraol (2007), vol. 41, 87-100
- D80 de Courcy Williams M. E. et al., Exp Appl Acaraol (2004), vol. 32, 1-13
- D81 Okabe K. and B.M. O'Connor, (2001), same as document D5

Annex 3 Counting results, Dr Roland Borowka,
dated 20 July 2015

Annex 4 Counting results, EWH BioProduction ApS,
dated 17 July 2015

V. The decision under appeal dealt with the sets of claims of a main request and auxiliary requests 1 to 12. Documents D68 and D69 were admitted into the opposition proceedings. The opposition division held, *inter alia*, with respect to the set of claims of the main request and auxiliary request 1, that the subject-matter of claim 1 lacked novelty over the disclosure of documents D1, D9, D10, D11, D12, D13, D15 and D23. As regards the set of claims of auxiliary request 2, the opposition division found that the subject-matter of

claim 1 lacked novelty over the disclosure of document D15. Concerning the set of claims of auxiliary requests 7 to 10 and 12, the opposition division found that the subject-matter of claim 1 lacked an inventive step when document D15 was taken to represent the closest prior art in view of the teachings of documents D1, D3 to D6, D9 and D17.

- VI. With the statement setting out the grounds of appeal, the appellant submitted sets of claims of a main request and auxiliary requests 1 to 14 and arguments with respect to, *inter alia*, novelty and inventive step. The main request and auxiliary requests 1, 2 and 6 to 14 correspond to the main request and auxiliary requests 1 to 3 and 5 to 12, respectively, considered by the opposition division in the decision under appeal. The documents filed with the statement setting out the grounds of appeal are not mentioned in this decision as they were not relevant for the decision.
- VII. In reply to the statement of grounds of appeal, respondents I, II and III submitted arguments with respect to, *inter alia*, novelty and inventive step. Respondent I submitted documents D79 and D80.
- VIII. With a letter dated 19 September 2018, respondent III withdrew its opposition. Consequently, it ceased being a party to the appeal proceedings.
- IX. The board scheduled oral proceedings, as requested by the parties, and issued a communication under Article 15(1) RPBA 2007, dated 1 August 2019, in which it indicated its preliminary opinion with respect to, *inter alia*, the construction of claim 1 of the main request and the requirements of novelty and inventive step. The board noted with respect to the set of claims

of the main request that "*it has seen no argument as to where in documents D1, D9, D10, D11, D12, D13 or D23 a mite composition comprising an Astigmatid mite species having fungus reducing properties and also fulfilling the other technical features of the composition defined in claim 1 is disclosed*".

- X. Further written submissions in preparation for the oral proceedings were received from the appellant and respondents I and II. Respondent II filed document D81.
- XI. The oral proceedings were re-scheduled twice and then scheduled to be held by videoconference on 27 and 28 September 2021.
- XII. Under cover of a letter dated 29 July 2021, third-party observations pursuant to Article 115 EPC were filed.
- XIII. The appellant and respondent I filed further written submissions, commenting on the third-party observations.
- XIV. During the oral proceedings, the appellant withdrew the main request and auxiliary request 1 and made auxiliary request 2 its main request.

Claim 1 of the main request reads as follows:

"1. Mite composition comprising:
- a population of individuals of a predatory mite species, preferably a predatory mite species selected from *Mesostigmatid* mite species or *Prostigmatid* mite species;
- a food source for the predatory individuals comprising individuals of at least one *Astigmatid* mite species, wherein at least a fraction of $\geq 50\%$ of the

Astigmatid individuals is immobilized by an immobilization treatment;
- optionally a food substance suitable for *Astigmatid* individuals;
- and optionally a carrier for the individuals of the mite species;
wherein immobilized *Astigmatid* individuals, and optionally the optional food source for *Astigmatid* individuals, are contacted with a fungus reducing agent comprising a fungus reducing mite population selected from a mycophagous mite species or an antifungal exudates producing mite species, said fungus reducing mite population preferably being selected from *Astigmatid* species."

At the end of the oral proceedings, the Chair announced the board's decision.

XV. The appellant's arguments are summarised below.

Consideration of the third-party observations

The observations were filed very late in the appeal proceedings. Third parties should not be allowed to submit new technical information at such a late stage since parties to the proceedings were not allowed to do so. If the submissions contained no new technical information, they could be disregarded.

Request to set aside the opposition division's decision to admit documents D68 and D69

Documents D68 and D69 were filed late in the opposition proceedings, were not *prima facie* relevant and should not have been admitted into the proceedings by the opposition division. Documents D68 and D69 only

disclosed that specific phytoseiid mites under specific circumstances might feed on specific plant pathogenic fungi. Document D68 did not reflect the common general knowledge available to the skilled person at the priority date as it was published after that date.

Consideration of documents D79 and D80

These documents could have been filed with the notice of opposition and should not be admitted into the appeal proceedings.

Main request - claim 1

Claim construction

The expression "*immobilized by an immobilization treatment*" had to be interpreted in light of paragraph [0017] of the patent and implied human intervention. Mites immobilised due to natural death or predation were not encompassed by the expression.

Novelty (Article 54 EPC)

Document D15

Document D15 did not anticipate the claimed subject-matter because the conclusion that all phytoseiid predatory mites fed on fungi was not supported by documents D68 and D69.

Document D9

Document D9 did not disclose the "*≥ 50% of the Astigmatid individuals*" feature. Document D65 (see Experiment 3) was not a reproduction of the disclosure

of document D9 (see Experiments 1 and 2).

Documents D1, D10, D11, D12, D13 and D23

No specific disclosure where all the features of the claim were disclosed in combination in documents D1, D10, D11, D12, D13 and D23 had been pointed to by the respondents. Likelihood and probability considerations did not suffice for concluding that a disclosure anticipates claimed subject-matter. The "fungus reducing agent"-feature was not disclosed for any of the rearing compositions disclosed in these documents.

Inventive step (Article 56 EPC)

Closest prior art and objective technical problem

The claimed composition differed from the composition disclosed in document D15 in that it comprised in addition a live fungus reducing mite population. The effects of this difference were threefold. Firstly, moulding was reduced (see paragraph [0008] of the patent and Example 1). Secondly, the performance of the rearing composition was better because extensive fungal growth negatively influenced the population development rate and maximum population density of predatory mites (see document D57). This represented an improvement over the disclosure in document D15. Thirdly, the preparation of the composition was simplified because the food source did not have to be removed.

The problem to be solved was the provision of an improved predatory mite rearing composition.

The problem was solved over the whole range of the claim because the claim required the presence of a

"fungus reducing agent" even if 100% of the *Astigmatid* mites were immobilised.

Obviousness of the claimed solution

It had not been recognised in document D15 that dead *Astigmatid* mites were also a good fungal substrate and promoted fungal growth. Therefore, document D15 provided no incentive to modify the rearing composition to arrive at the claimed solution.

The documents cited by the respondents disclosed only that certain *Astigmatid* mites fed on certain fungi in the context of stored grain products and did not investigate fungal growth on immobilised *Astigmatid* prey or disclosed that live *Astigmatid* mites reduced the growth of fungus on immobilised *Astigmatid* mites.

Reimbursement of the appeal fee

The opposition division's decision on inventive step had been taken without properly granting the appellant the right to be heard. This contravened Article 113(1) EPC and constituted a substantial procedural violation. It was equitable to reimburse the appeal fee.

XVI. Respondent I's and respondent II's arguments are summarised as follows.

Consideration of the third-party observations

The observations supported the arguments of the respondents and did not introduce new technical information.

Request to set aside the opposition division's decision to admit documents D68 and D69

The opposition division had correctly found that documents D68 and D69 were *prima facie* relevant.

The publication date of document D68 was later than the priority date of the patent but it reviewed scientific articles that had been published prior to the priority date.

Consideration of documents D79 and D80

Document D79 had been filed to further support the biological fact that there was always a portion of immobilised and/or dead *Astigmatid* mites within rearing compositions (see Figure 1). Document D80 had been filed to further support the biological fact that predatory mites had antifungal properties.

Main request - claim 1

Claim construction

The expression "*immobilized by an immobilization treatment*" did not imply human intervention. The term "immobilized" was equivalent to the immobilised state achieved by the immobilisation treatment. The immobilisation treatment was not further defined in the claim and did not result in an identifiable difference of the immobilised mites. The resulting mites were indistinguishable from otherwise immobilised prey mites, e.g. dead and predated mites. The appellant's interpretation was contradicted by the definition given in paragraph [0017] of the patent. Paragraph [0018] of the patent provided a definition of the immobilisation

treatment and included treatment causing death.

Novelty (Article 54 EPC)

Document D15

Document D15 described a rearing system with predatory mites and *Astigmatid* mites as a food source in which the whole population of prey mites had been immobilised, therefore the " $\geq 50\%$ of the *Astigmatid* individuals is immobilized" feature was met. The phytoseiid predatory mites of document D15 might have antifungal properties (see document D68, page 297, end of first paragraph; document D69, page 124, abstract and document D80, page 7, last paragraph). Therefore, the "fungus reducing agent"-feature was implicitly disclosed.

The teaching of documents D68 and D69 which concerned specific phytoseiids was relevant in relation to claim 1 which was not limited to a species of predatory and/or mycophagous mites or antifungal exudates producing mite or fungus, i.e. it was a generic claim. It was well established that a specific disclosure was detrimental for the novelty of generically claimed subject-matter.

Document D9

Document D9 described a rearing system comprising *Neocyclus californicus* (= *A. Californicus*) as a predator mite and *L. destructor* as a prey mite (see claims 2 and 6 and Experiment 2). Document D65 showed that in such a rearing system, necessarily 53.6% of the *L. destructor* mites were dead (see Experiment 3). Therefore, the " $\geq 50\%$ of the *Astigmatid* individuals is

immobilized" of the claim feature was implicitly disclosed in document D9.

Documents D1, D10, D11, D12, D13 and D23

Documents D1, D10, D11, D12, D13 and D23 disclosed rearing systems with predatory mites and living *Astigmatid* prey mites. In such rearing compositions, a considerable number of prey mites were immobilised or even dead (see Annex 3, Annex 4 and document D65).

Even if these documents did not explicitly mention that the *Astigmatid* species had fungus reducing properties, this was an inherent characteristic of the *Astigmatid* mites species (see documents D3, D4, D5, D6, D17 and document D81, page 494, second paragraph). A certain generalisation from the behaviour of individual representatives to other representatives of the same genus was justifiable. The patent stated in paragraph [0034] that many *Astigmatid* species had fungus reducing properties. If it were not assumed that *Astigmatid* species generally had fungus reducing properties, the patent could not be carried out over the whole range claimed.

Also, predatory mites had antifungal properties (see documents D68 and D69).

Inventive step (Article 56 EPC)

Closest prior art and objective technical problem

The claimed composition differed from the composition disclosed in document D15 in that it comprised in addition a live fungus reducing mite population.

The effect associated with this difference was a reduction in fungal growth.

Document D57 could not provide evidence of an advantage over the rearing system of document D15 because millet chaff was used as a carrier instead of vermiculate as disclosed in paragraph [0038] of document D15.

The objective technical problem to be solved was the control of fungal growth that could occur in the composition of document D15 while at the same time maintaining an equally successful rearing result. Alternatively, the objective technical problem to be solved was the provision of an alternative fungi-reducing system.

Neither objective technical problem was solved over the whole range of the claim because the claim covered embodiments in which all *Astigmatid* individuals were dead.

Obviousness of the claimed solution

To deal with the fungal problem, the skilled person would have added *Astigmatid* mites to the rearing composition of document D15 because the antifungal property of *Astigmatid* mites were known in the art (see documents D3, D4, D5, D6, D17 and D33). The antifungal properties of exudates was also known (see documents D16, D17 and D31).

If an expert in the art was faced with fungal problems when adding 100% dead *Astigmatid* prey mites and knew that there were no fungal problems when adding live prey mites (like in document D1 or document D9 where no problem of fungi is mentioned), it would have been

obvious to add some living *Astigmatid* mites to benefit from their known antifungal properties.

The claimed subject-matter lacked inventive step starting from document D15 combined with the disclosure in numerous documents showing the antifungal activity of *Astigmatid* mites.

Reimbursement of the appeal fee

There had been no substantial procedural violation during the opposition proceedings.

- XVII. The appellant requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of the set of claims of the main request, filed as auxiliary request 2 with the statement of grounds of appeal. It also requested the reimbursement of the appeal fee in view of a substantial procedural violation by the opposition division.

Respondent I and respondent II requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 99 EPC and is admissible.

Consideration of the third-party observations

2. It is at the discretion of the boards to take into consideration or disregard third-party observations filed during opposition appeal proceedings. While the EPC does not prescribe any time limit for filing

observations pursuant to Article 115 EPC, in accordance with the case law of the boards, Article 115 EPC must not be interpreted in such a way as to grant third parties rights which extend beyond those of parties to proceedings (see Case Law of the Boards of Appeal, 9th edition 2019, ("CLBA"), section III.N.4.4 and decision T 951/91, OJ EPO 1995, 202, Reasons, point 5.8). Therefore, when exercising their discretion, the boards normally take criteria into account which they consider when deciding on the admissibility of parties' submissions considered "late-filed" within the meaning of Article 114(2) EPC.

3. In the case at hand, the third-party observations were filed at a very late stage of the appeal proceedings, two months before the oral proceedings. They address issues raised in the board's communication, i.e. two years earlier (see sections XII and IX).
4. In so far as the submissions represent an amendment of the case made by the respondents on appeal, the board considers that admitting these submissions would accord the third party a more favourable treatment than would be given to one of the respondents seeking to admit such submissions at this late stage of the proceedings. In so far as the submissions add no new technical information, as asserted by the respondents, the board sees no reason why they should be considered in the appeal proceedings.
5. Accordingly, the board decided that the third-party observations filed under cover of the letter dated 29 July 2021 are to be disregarded in the appeal proceedings.

Request to set aside the decision of the opposition division to admit documents D68 and D69

6. Documents D68 and D69 were filed after expiry of the nine-month period stipulated in Article 99(1) EPC and the date fixed by the opposition division pursuant to Rule 116(1) EPC. The documents were relied on by respondent II to support the implicit disclosure of the predatory mites' fungivore properties in document D15.
7. The opposition division, considering that documents D68 and D69 were the sole documents dealing with the fungivore properties of predatory mites and therefore likely to change the outcome of the opposition proceedings, admitted the documents into the opposition proceedings in the exercise of its discretion under Article 114(2) EPC.
8. It is established case law that if a discretionary decision of the opposition division is challenged on appeal, it is not the task of the board to review all the facts and circumstances as if it were in the place of the opposition division and to decide whether or not it would have exercised discretion in the same way. The board should overrule the way in which the opposition division exercised its discretion only if it concludes that the opposition division did so according to the wrong principles or without taking into account the right principles, or that it exercised its discretion in an unreasonable way and thus exceeded the proper limit of its discretion (see CLBA, section V.A.3.1b)).
9. Consideration of *prima facie* relevance for the outcome of the proceedings is among the criteria to be considered by the department of first instance when deciding on the admittance of late-filed documents

(see CLBA, section IV.C.4.5.3). It is apparent that the opposition division considered this criterion and concluded that it was fulfilled (see point 7 above). Therefore, the board takes the view that, when admitting documents D68 and D69 into the proceedings, the opposition division exercised its discretion in accordance with the right principles.

10. Whether the opposition division erred with respect to the disclosure in documents D68 and D69 is not relevant in this context but will be considered in the context of the assessment of novelty (see point 26 and following below).
11. Accordingly, the decision of the opposition division admitting these documents is not set aside, and the documents are considered in the appeal proceedings.

Consideration of documents D79 and D80

12. Documents D79 and D80 were filed by respondent I in reply to the statement setting out the grounds of appeal (see section VII). Document D79 was cited in support of the argument that there is always a portion of immobilised and/or dead *Astigmatid* mites within rearing compositions. Document D80 was relied on to support the argument that all predatory mites have antifungal properties.
13. Under Article 12(4) RPBA 2007, the board may exercise its discretion to hold inadmissible any document filed with the statement of grounds of appeal or any reply to it if the submission could have been presented in the proceedings before the opposition division. Admittance of documents newly filed with the reply to the statement of grounds of appeal hinges on, *inter alia*,

whether a party was in a position to make its submissions earlier and whether it could have been expected to do so under the circumstances (see CLBA, sections V.A.4.11.1 and V.A.4.11.3).

14. The admittance of documents D79 and D80 was contested by the appellant. However, the appellant provided no argument why in the circumstances of the case at hand respondent I could have been expected to file these documents with the notice of opposition.
15. The board further considers that respondent I's submissions do not raise a fresh case but instead aim at further supporting its case on novelty without exceeding the legal and factual framework beyond that already discussed before the opposition division. As the board has seen no reason why documents D79 and D80 should be held inadmissible and thus not be considered, it decided to reject the appellant's request that these documents not be admitted into the appeal proceedings (Article 12(4) RPBA 2007).

Main request - claim 1

Claim construction

16. The claimed mite composition (see section XIV) is characterised by the following features:
 - (A) a population of individuals of a predatory mite species,
 - (B) a food source for the predatory individuals comprising individuals of at least one *Astigmatid* mite species, in which
 - (C) at least a fraction of $\geq 50\%$ of the *Astigmatid* individuals

(D) is immobilised by an immobilisation treatment and (E) in which immobilised *Astigmatid* individuals are contacted with a fungus reducing agent comprising a fungus reducing mite population selected from a mycophagous mite species or an antifungal exudates producing mite species

17. The opposition division held that *Astigmatid* mites immobilised due to predation or natural death fell within the meaning of feature (D). This was contested by the appellant.
18. Feature (D) is a process feature. In accordance with the case law of the boards, a process feature in a product-by-process claim only contributes to the novelty of a product claim if it gives rise to a distinct and identifiable characteristic of the product (see e.g. decision T 179/03, Reasons, points 3.7 to 3.9).
19. The term "immobilized" means that the *Astigmatid* individuals are impaired in their motility. Since the nature of the immobilisation treatment is not specified in the claim, the immobilisation treatment does not result in any further distinct and identifiable characteristic of the immobilised *Astigmatid* individuals.
20. Interpretation of feature (D) in light of the description, as advocated by the appellant, does not lead to a different conclusion. According to the description, immobilisation treatments are treatments that "*impair the motility*" that an *Astigmatid* individual has in any of its life stages (see paragraph [0017]) and encompass treatments causing death (see paragraph [0018]). The board therefore

disagrees with the appellant's limited construction of feature (D) as requiring a human intervention or excluding prey mites predated by predatory mites and mites that died due to natural causes.

21. The board concludes from the above that feature (D) is to be construed as encompassing *Astigmatid* mites that are impaired in their motility while it does not exclude *Astigmatid* prey mites that are dead or were predated.

Novelty (Article 54(2) EPC)

22. To destroy novelty, the claimed subject-matter must be disclosed in the state of the art. This can be by way of explicit or implicit disclosure. An implicit disclosure relates solely to matter which is not explicitly mentioned in the cited art but is necessarily implied by its explicit disclosure. Furthermore, a document belonging to the prior art must be read as it would have been read by a person skilled in the art on its publication date, taking into account the common general knowledge (CLBA, sections I.C.2.3 and I.C.4.3).
23. In the decision under appeal, the disclosure of the rearing composition in document D15 was held to anticipate the claimed composition. This finding was contested by the appellant.
24. Document D15 discloses a mite composition comprising a rearing population of phytoseiid predatory mite species and a population of at least one species from the order *Astigmata* as a food source for the predatory mites (see claim 1 and paragraph [0012] of document D15). The entire population of the species from the order

Astigmata is not alive, i.e. was killed to obtain a dead population (see paragraphs [0012] and [0015]). Therefore, document D15 explicitly discloses a mite composition having features (A), (B), (C) and (D) of the claim.

25. It is uncontested that document D15 is silent about any fungivore properties of the phytoseiid predatory mite species in the rearing composition. Nevertheless, the opposition division held that feature (E) of the claim was implicitly disclosed in document D15. Relying on documents D68 and D69, the opposition division held that phytoseiid predatory mites have antifungal effects by being mycophagous mites and therefore "*the necessary antifungal effect due to mites is provided by the predatory mites*".
26. Document D68 discloses that "[d]espite being known mainly as predators of small arthropods and nematodes, most phytoseiids also have other feeding habits, consuming food items such as fungi, plant exudates, pollen etc." (see page 297, second paragraph) and further that "*Neoseiulus cucumeris is also known to feed on P. latus, P. pallidus, T. urticae and fungi (Gerson et al 2003; Weintraub et al 2003).*" (see page 305, penultimate paragraph). Document D69 discloses that "*Generalist predatory mites belonging to the Phytoseiidae play a major role in keeping phytophagous mites below economic threshold levels in European apple orchards and vineyards. Apart from their primary prey, these phytoseiids can exploit a range of other foods, among which pollen and plant pathogenic fungi are very important*" (see page 124, abstract) and further that "*Plant pathogenic fungi can also be food sources for certain predatory mites (Pozzebon & Duso, 2008; Pozzebon et al., 2009)*" (see

page 124, lines 4 to 3 from the bottom).

27. It is evident from the preceding point that documents D68 and D69 do not disclose that *all* phytoseiid mites are fungivore but only that "most" or "certain" phytoseiid mites eat fungi. Accordingly, the board cannot accept that an antifungal effect is necessarily implied by the disclosure of a phytoseiid predatory mite species in document D15. Feature (E) is therefore not implicitly disclosed in document D15, and the reasoning of the opposition division cannot hold for this reason alone. Whether documents D68 and D69 can be accepted as disclosing the relevant common general knowledge (see point 22) need not be decided.
28. Document D80, relied on by the respondents as providing further evidence that feature (E) was implicitly disclosed in document D15, discloses that the presence of fungal growth promotes the survival of two specific phytoseiid mites, *N. californicus* and *N. cucumeris* (see page 7, last paragraph).
29. Therefore, document D80 also fails to disclose that *all* phytoseiid predatory mites have antifungal properties, and the respondents' line of argument with respect to an implicit disclosure of feature (E) in document D15 based on the disclosure in D80 does not succeed.
30. The respondents' line of argument based on the assertion that the teaching of documents D68 and D69 concerning specific phytoseiids was relevant to a claim that relates to predatory mites in general likewise fails. The argument is based on the established principle that a specific disclosure destroys the novelty of a generic feature (see CLBA, section I.C.5.2.6). However, it is document D15 which

discloses a rearing composition alleged to anticipate the claimed subject-matter, not document D68 or D69. Documents D68 and D69 disclosing specific phytoseiid mites that are fungivore cannot therefore lead to the conclusion that the rearing composition of document D15 which comprises "a phytoseiid predatory mites species" would be novelty-destroying for the claimed subject-matter.

31. The respondents maintained on appeal that the claim furthermore lacked novelty over the disclosure in document D9 and documents D1, D10, D11, D12, D13 or D23. These documents are dealt with in turn below.

Document D9

32. Document D9 discloses a mite composition comprising a rearing population of *N. californicus* (= *A. californicus*) as a phytoseiid predatory mite species and *L. destructor*, an *Astigmatid* mite, as a food source (see claims 2 and 6, Experiment 2). *L. destructor* has fungus reducing properties (see e.g. Example 5 of the patent). Therefore, document D9 discloses a mite composition having features (A), (B), (C) and (E) of the claim.
33. Document D9 is silent about any immobilisation of the prey mites. Relying on the disclosure in document D65, the respondents submitted that feature (D) was implicitly disclosed in document D9.
34. In Experiment 3 of document D65, the fraction of *L. destructor* dead due to natural causes or predation by *A. californicus* was determined in rearing compositions and found to be 53.6% (see the table on page 7). The conditions used in document D65 with

respect to carrier material, food source, moisture level and temperature simulated mass rearing conditions. However, document D65 is not a reproduction of the disclosure of document D9 (see Experiments 1 and 2). Accordingly, document D65 cannot serve as evidence that under the rearing conditions disclosed in document D9 (see Experiment 1) necessarily at least a fraction of $\geq 50\%$ of the *Astigmatid* individuals is immobilised. Feature (D) is therefore not implicitly disclosed in document D9.

Documents D1, D10, D11, D12, D13 and D23

35. The respondents did not point to any mite composition in documents D1, D10, D11, D12, D13 or D23 that would fulfil all the technical features of the composition defined in the claim.
36. As regards any alleged implicit disclosure of feature (E) for the mite compositions of these documents, the board notes that documents D3, D4, D5, D6, D17 and D81 disclose that certain - not all - *Astigmatid* mites have fungivore properties. Documents D68, D69 and D80 disclose that certain - not all - phytoseiid predatory mites have fungivore properties. The reasoning as set out in point 27 above applies *mutatis mutandis*. Therefore, documents D1, D10, D11, D12, D13 or D23 do not disclose mite compositions fulfilling feature (E) of the composition defined in claim 1.
37. The respondents' argument that it had to be assumed that all *Astigmatid* species have fungus reducing properties because otherwise the claimed invention could not be carried out is not found persuasive because the claim is limited to (*Astigmatid*) mites that have fungus reducing properties (see feature (E)).

Astigmatid mites that do not have such properties are not encompassed by feature (E) of the claim. However, this does not mean that all *Astigmatid* species have fungus reducing properties.

Conclusion on novelty (Article 54 EPC)

38. The board concludes from the above that the subject-matter of claim 1 of the main request is novel over the disclosure in any of documents D1, D9, D10, D11, D12, D13, D15 and D23.

Inventive step (Article 56 EPC)

Closest prior art and objective technical problem

39. It was common ground that the disclosure in document D15 represents the closest prior art for the assessment of inventive step. The board sees no reason to diverge from this finding.
40. The claimed mite rearing composition differs from the mite rearing composition of document D15 (see point 24 above) in that the immobilised *Astigmatid* individuals are contacted with a fungus reducing mite population (feature E).
41. As regards the effect(s) linked to this difference, the moulding tests performed in Examples 1 and 5 of the patent provide evidence that frozen prey mites (as are used in the rearing system of document D15) are susceptible to moulding. Adding motile fungivore *Astigmatid* mites such as *C. lactis* and *T. entomophagous* reduces mycelium growth and succeeds in keeping dead prey mites available for predation (see paragraph [0064] of the patent). The distinguishing

feature thus reduces fungal growth and keeps dead prey mites available as food for predator mites.

42. The rearing experiments reported in document D57 convincingly show that the distinguishing feature moreover results in an advantage over the predatory mite rearing system disclosed in document D15. In this document, the population development of phytoseiid predators on a population of dead *C. lactis* mites was compared to the population development on a population of dead *C. lactis* mites to which a portion of live *C. lactis* individuals is added as an anti-fungal agent (see page 1, last paragraph). A comparison of the predators' population size in dependence of the different food type (dead *C. lactis* mites versus dead plus live *C. lactis* mites) shows that fungal growth prevents population development of phytoseiid predators on a population of dead *C. lactis* mites. Adding live *Astigmatids* keeps fungus growth at an acceptable level and allows growth of the predatory mites (see page 3, last paragraph, Table 1 and Figure 7). The absence/presence of live fungivore *C. lactis* mites is the sole difference between the two rearing populations. Therefore, the board agrees with the appellant that it can be concluded that the technical effect of reduced fungal growth and enhanced population growth of the predatory mites is attributable to the presence of live mites with antifungal properties in the rearing composition.
43. The respondents' criticism of the carrier used in the rearing experiments of document D57 is not justified. In accordance with established case law, it is required that the nature of the comparison with the closest prior art be such that the advantage is shown to have its origin in the distinguishing feature of the

invention compared with the closest prior art (CLBA, section I.D.10.9). Therefore, an exact reproduction of the conditions disclosed in document D15 is not necessary.

44. The board concludes that an improvement over the rearing composition disclosed in document D15 can be acknowledged without the need to consider any further effects of the distinguishing feature asserted by the appellant.
45. The two objective technical problems formulated by the respondents ignore the advantages achieved by the distinguishing feature and therefore cannot be accepted.
46. Instead, the board agrees with the appellant that the objective technical problem to be solved by the claimed subject-matter is the provision of an improved mite rearing system.
47. The board is satisfied that the objective technical problem is solved over the whole range of the claim.
48. The respondents argued that the claim covered embodiments in which all *Astigmatid* individuals were dead and that the objective technical problem therefore was not solved over the whole range claimed. However, this argument ignores the fact that the claim requires that the composition comprise a fungus reducing agent (feature (E)) even if 100% of the *Astigmatid* individuals are dead (feature D). Therefore, the argument is not considered convincing.

Obviousness of the claimed solution

49. The question to be answered in assessing obviousness is whether the skilled person starting from the rearing composition disclosed in document D15 and seeking to solve the objective technical problem formulated in point 46 above would have modified that rearing composition to arrive at the claimed composition in an obvious manner.
50. According to document D15, it is the presence of food material used to feed the prey mites during predator production that causes problems of fungal contamination in predatory mite rearing compositions (see paragraph [0009]). This fungal contamination problem is overcome in document D15 by not having live *Astigmatid* mites in the rearing composition, thus avoiding the presence of food material for the prey mites (see paragraph [0018]).
51. However, document D15 did not mention that such rearing compositions comprising only dead *Astigmatid* prey mites have a fungal contamination problem that affects the population development of the predatory mites. Therefore, document D15 provides no incentive to add any antifungal agent to the rearing compositions it discloses.
52. In particular, document D15 provides no incentive to add living *Astigmatid* mites having fungivore properties to its rearing compositions since this would be contrary to the essence of the teaching of document D15 as regards the avoidance of fungal growth, i.e. by the absence of any live *Astigmatid* mites.

53. Furthermore, document D3 (see summary on pages 247 and 248), document D4 (see page 1299, left-hand column, first paragraph), document D5 (see page 493, abstract, Table 1), document D6 (see page 2703, abstract), document D16 (see page 260, summary), document D17 (see page 205, summary), document D31 (see page 578, right-hand column, last paragraph and Table 1) and document D33 (see page 514, abstract) do not investigate the fungal growth on immobilised *Astigmatid* prey mites. And none of these documents discloses that live fungivore *Astigmatid* mites or antifungal exudates producing mites reduce the growth of fungus on immobilised *Astigmatid* prey mites.
54. The skilled person seeking to solve the objective technical problem formulated in point 46 above therefore derives no incentive from documents D3, D4, D5, D6, D16, D17, D31 or D33 to add a fungus reducing agent comprising a fungus reducing mite population selected from a mycophagous mite species or an antifungal exudates producing mite species to the rearing composition of document D15. Finally, in the board's view, the respondents' lines of arguments based on the premise that the skilled person is faced with fungal problems are based on hindsight.
55. The board concludes that starting from the disclosure in document D15 and seeking to provide an improved mite rearing system, the skilled person would not arrive in an obvious manner at the claimed composition.
56. Therefore, the subject-matter of claim 1 involves an inventive step (Article 56 EPC).
57. The respondents raised no other objections against the subject-matter of the set of claims of the main

request, and the board has none either.

58. The appeal is thus allowable.

Reimbursement of the appeal fee

59. Under Rule 103(1)(a) EPC, the appeal fee is to be reimbursed in full where the board deems an appeal to be allowable if such reimbursement is equitable by reason of a substantial procedural violation.

60. Decision J 7/83 defines a substantial procedural violation as "an objective deficiency affecting the entire proceedings" (see Reasons, point 12). Furthermore, in accordance with established case law, for the reimbursement of the appeal fee to be equitable, there has to be not only a substantial procedural violation but also a causal link between this procedural violation and the necessity to file the appeal (CLBA, section V.A.9.7.1).

61. In the case at hand, the appellant argued that it was deprived of its right to be heard with respect to the opposition division's decision on inventive step.

62. Irrespective of whether the conduct of the opposition division constituted a procedural violation, the board considers that the alleged violation did not affect the proceedings before the opposition division as a whole but was limited to the assessment of inventive step (regarding, *inter alia*, the seventh auxiliary request). However, the decision is also based on the findings that the subject-matter of the set of claims of, *inter alia*, the main request and auxiliary requests 1 and 2 lacked novelty. Furthermore, the appellant's appeal is directed to the setting aside of the opposition

division's decision with respect to the findings of lack of novelty *and* lack of inventive step (see sections V and VI above). Since the opposition division's findings on lack of novelty, on which its decision is likewise based, are not affected by the alleged procedural violation, a reimbursement of the appeal fee would not be equitable.

63. Consequently, the requirements of Rule 103(1)(a) EPC are not met, and the appellant's request for reimbursement of the appeal fee is refused.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in amended form on the basis of the set of claims of the main request, which was filed as auxiliary request 2 with the statement of grounds of appeal, the drawings of the granted patent and a description to be adapted thereto.

The Registrar:

The Chair:



I. Aperribay

B. Claes

Decision electronically authenticated