

Examiners' Report - Paper B 2007 Chemistry

Background:

The paper related to a carpet shampoo. The patent application presented a carpet shampoo, which cleaned carpets very effectively, minimised the degradation of the soil and stain resistance of the carpet, was able to kill dust mites (in other words contained an acaricide) and was not toxic. The patent application proposed a composition consisting of:

5-20 wt. % of surfactant

1-8 wt. % of a resoiling inhibitor

0.1-5 wt. % of an acaricide

1-2 wt. % of a sequestering agent

0-5 wt. % of an organic solvent

and balance water.

Two documents were cited against the patent application in the communication.

Document 1 (see example, and paragraphs [0002] to [0007]) which disclosed carpet shampoos containing 5-18 wt.% of surfactants (of which preferably at least 50% were anionic), 1-8 wt.% of a resoiling inhibitor and 1-3 wt.% of a sequestering agent. The composition also preferably contained 0.5-1 wt. % of an essential oil (such as lemon oil or deerhorn cedar oil or lavender oil) which was used as a fragrance. The shampoos containing lemon oil or deerhorn cedar oil contained an acaricide, as was clear from the application (although these oils were not used as acaricides in document 1). The use of an organic solvent was optional. The resoiling inhibitor used was a polyacrylate containing monomer units of the formula $\text{CF}_3(\text{CF}_2)_8\text{CH}_2\text{OOC-CH=CH}_2$. The shampoo of the example in document D1 was particularly relevant.

Document 1 was thus novelty destroying for the subject-matter of claims 1-4 and 7 (Articles 52(1), 54(1) and 54(2) EPC).

Document 2 (see paragraphs [0002] to [0006]) was cited against claims 5 and 6 and disclosed carpet shampoos containing 1 wt.% of benzyl benzoate or phenyl salicylate as an acaricide where the compound was added with a glycol ether solvent at a concentration of 2 wt.% of the shampoo.

The subject-matter of claims 5 and 6 was novel with respect to document 2 since it did not disclose the precise composition of the carpet shampoo and in particular did not disclose a shampoo with the composition required by claim 1 of the application. Document 2 did however indicate that the acaricide could be mixed with commercially available carpet shampoos and identified that of document 1 as a typical carpet shampoo. It was thus obvious to mix the acaricide of document 2 with a shampoo as disclosed in document 1 and thus to arrive at a carpet shampoo as defined in claims 5 and 6 of the application. The subject-matter of claims 5 and 6 therefore did not involve an inventive step (Articles 52(1) and 56 EPC).

Expected claims (Total 50 points):

A careful comparison between the carpet shampoos disclosed in the application and those defined in the prior art, would reveal that there were no significant differences in as far as the surfactants, the resoiling inhibitors and the sequestering agents were concerned. Therefore the claims had to be limited on the basis of the acaricide. The application mentioned six different acaricides: benzyl benzoate, phenyl salicylate and the essential oils deerhorn cedar oil, lemon oil, rosemary oil and thyme oil. Lemon oil and deerhorn cedar oil were used as fragrances in document 1 and thus a claim to a shampoo containing these oils was not novel. A shampoo containing benzyl benzoate or phenyl salicylate was suggested by a combination of documents 1 and 2 and thus was not inventive. It was however possible to claim a shampoo limited to the other two essential oil acaricides disclosed in the application. In addition, it was necessary to specify that the surfactant used contained at least 50 wt. % of anionic surfactants and that no organic solvent is present since these limitations are essential when an essential oil is to be used as the acaricide (see paragraphs [0011] and [0012] and claims 1, 3 and 7 of the application). The candidates were thus expected to formulate a claim of the following scope to a carpet shampoo:

Carpet shampoo consisting of:

- 5-20 wt. % of surfactant in which at least 50 wt. % of the surfactant is anionic surfactants
- 1-8 wt. % of a resoiling inhibitor
- 0.1-5 wt. % of an acaricide selected from rosemary oil and thyme oil
- 1-2 wt. % of a sequestering agent
- and balance water.

This claim was worth up to 32 points.

Up to 15 points were deducted from this claim if the candidate failed to specify that at least 50 wt. % of the surfactants were anionic. Up to 10 points were deducted if organic solvents were not excluded. A claim that was not novel generally received no points. Up to 5 points were deducted per unclear formulation in the claim. Up to 10 points were deducted per feature that added subject-matter. Each further unnecessary limitation in the claim, such as requiring that a mixture of surfactants was used, resulted in a deduction of up to 10 points.

A number of candidates attempted to establish the novelty of a shampoo with respect to document 1 by a disclaimer. The content of Document 1 was not an accidental anticipation in the sense of decisions G01/03 and G02/03 since this document was in the same technical field as the application. Thus disclaiming subject-matter disclosed in document 1 contravened Article 123(2) EPC. Claims containing such a disclaimer were awarded a maximum of 12 points.

Candidates were also expected to formulate a claim to a process for cleaning carpets and an equivalent use claim. The claim had to include the limitation that the shampoo is allowed to remain on the carpet for at least 12 hours [0013] but it was not necessary to exclude any of the essential oils mentioned in the application. The expected method claim had the following scope:

Method for cleaning carpets comprising the steps of:

Applying a carpet shampoo consisting of 5-20 wt. % of surfactant in which at least 50 wt. % of the surfactants are anionic surfactants

1-8 wt. % of a resoiling inhibitor

0.1-5 wt. % of an acaricide selected from lemon oil, deerhorn cedar oil, rosemary oil and thyme oil

1-2 wt. % of a sequestering agent

and balance water to a carpet,

leaving the shampoo on the carpet for at least 12 hours and removing the residue.

A total of 15 points were available for this claim. Up to 7 points were deducted if the claim failed to specify that the at least 50 wt % of the surfactants were anionic or if the essential oil was not limited to the four essential oils which are acaricides or if the claim was limited to the use of a shampoo containing rosemary oil or thyme oil as the acaricide. Up to 5 points were deducted per additional unnecessary limitation in the claim.

A total of 3 points were available for dependent claims. Candidates were expected to maintain original claims 2 and 4. Additional dependent claims which were awarded points defined the preferred surfactants (see paragraph [0007]).

A number of candidates included additional unnecessary independent product and/or method/use claims in addition to those identified above, contrary to Rule 29(2) EPC. Some candidates included a further clearly invalid independent claim in addition to the expected claims. In both of these cases up to 10 points could be deducted from the maximum available for product and/or method/use claims.

Typical invalid claims included use claims, which did not require that the carpet shampoo used contained all the features of original claim 1. Such a generalisation of the shampoo defined in the application was not supported by the application and thus added subject-matter, contrary to Article 123(2) EPC.

Arguments (50 points):

Basis for the amendments:

The candidates were expected to indicate a basis for each amendment made as well as for any new combinations of features (a total of 8 points are available for these arguments). The product claim finds a basis in original claims 1, 3 and 7 (or the equivalent passages in the description). A complete response also indicated why it was permissible to only claim two of the four essential oils defined in original claim 7. The process claim found a basis in claims 1, 3 and 7 in combination with paragraphs [0001] and [0013].

Novelty:

The candidates were expected to briefly summarise document 1 and to explain how the claimed subject-matter differed from that defined in document 1. The product claim differed in that the shampoo contained essential oils not disclosed in document 1. The process claim was novel because it required that the carpet shampoo was left on the carpet for at least 12 hours. Points were also available for summarising document 2. No points were however awarded for arguing that the claimed subject-matter was new with respect to document 2, since no novelty objections were raised in the communication on the basis of this document. A total of 10 points were available for these arguments.

Inventive step:

The candidates were expected to justify an inventive step for both the product and the process claims. A total of 32 points were available for these arguments.

The candidates were first expected to define the closest state of the art and justify this choice (6 points). The candidates should ideally have referred to the problem as originally presented in the application (see paragraphs [0003] to [0005]). The candidates were then expected to compare this problem with the problems addressed by documents 1 and 2. It was expected that document 2 would be identified as the closest prior art for both the process and product claims as only this document addressed all the aspects of the problem as originally filed (including ensuring that the shampoo can reduce the number of dust mites in the carpet).

The candidates were then expected to highlight the significant differences between the shampoo and process disclosed in document 2 and those claimed. In particular it was expected that the candidates highlighted the use of essential oils as acaricides and the fact that the shampoo was left on the carpet for at least 12 hours (4 points).

The candidates were then expected to define the objective problem solved in view of document 2 and to indicate why this problem was solved (8 points). The problem was providing a less toxic and more environmentally friendly carpet shampoo, which still provides good cleaning, resoiling and acaricidal properties. The candidates were expected to highlight the fact that essential oils are less toxic than the acaricides used in document 2 (see application paragraph [0009]) and that, unlike the acaricides used in document 2, essential oils are added to carpet shampoos without organic solvents making the shampoo more environmentally friendly.

The candidates were finally expected to discuss why the proposed solution to the problem is not obvious in view of document 2 alone or in view of a combination of documents 1 and 2 (6 points for the product claim and 6 points for the process claim). It was expected that the candidates point out that document 2 only disclosed acaricides which are chemically unrelated to the essential oils now used. A further good argument for the product claim is that essential oils are only described as fragrances in document 1 and the essential oils claimed in the product claims are not fragrances. In far as the process claim is concerned it was expected that the candidates argue that neither document discloses using carpet shampoos under conditions which would enable an essential oil to have an acaricidal effect. Documents 1 and 2 only disclose leaving the shampoo on the carpet for 4 hours. For an essential oil to have an acaricidal effect the shampoo has to be left on the carpet for at least 12 hours. There is no suggestion in either document 1 or 2 to increase this time period.

General points:

The examiners were pleased to see a reduction in the number of notes to examiners. They had no objection to such notes being submitted and gave any submitted due consideration. In most cases it was found that they were not an effective use of the candidates' time and rarely enhanced the candidates' answer.

As in previous years some candidates apparently spent considerable time in including things such as the date, the address of the EPO or requests for oral proceedings. Candidates may find it a better use of their time to concentrate on substantive issues first. Few, if any, marks are available for including matters such as the address of the EPO.

EXAMINATION COMMITTEE I

Candidate No. _____

Paper B (Chemistry) 2007 - Schedule of marks

Category	Maximum possible	Marks awarded	
		Marker	Marker
Product claim	32		
Method claim	15		
Dependent claims	3		
Claims	50		
Basis for Amendments	8		
Novelty	10		
Inventive Step	32		
Arguments	50		
Total	100		

Sub-Committee for Chemistry agrees on marks and recommends the following grade to the Examination Board:

PASS
(50-100)

FAIL
(0-49)
COMPENSABLE FAIL
(45-49, in case the candidate sits
the examination for the first time)

6 July 2007