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Datasheet for the decision of 8 October 2024

Case Number: T 1598/22 - 3.2.02

Application Number: 15797170.6

Publication Number: 3217860

IPC: A61B5/00

Language of the proceedings: EN

Title of invention:
METHOD FOR QUANTIFYING PLAQUE IN PET ANIMALS

Applicant:
Mars, Incorporated

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
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Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0

Case Number: T 1598/22 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 8 October 2024

Appellant: (Applicant)	Mars, Incorporated 6885 Elm Street McLean, VA 22101 (US)
Representative:	Haseltine Lake Kempner LLP One Portwall Square Portwall Lane Bristol BS1 6BH (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 15 February 2022 refusing European patent application No. 15797170.6 pursuant to Article 97(2) EPC**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	D. Ceccarelli
	Y. Podbielski

Summary of Facts and Submissions

I. The applicant appealed against the Examining Division's decision to refuse the European patent application.

II. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request filed with the statement of grounds of appeal on 23 June 2022. As an auxiliary measure, the appellant requested that auxiliary requests 1 to 19, also filed with the statement of grounds of appeal on 23 June 2022, be considered.

III. The following documents are mentioned in this decision:
D1: EP 2 210 582 A1
D2: US 2013/0323673 A1
D3: US 8,647,119 B1

IV. Claim 1 of the main request reads as follows:

"A method of detecting and quantifying dental plaque in a test subject, comprising the following steps:

(i) obtaining one or more images of one or more teeth of a conscious test subject using an image taking device that is capable of detecting fluorescence;

(ii) analysing the images; and

(iii) quantifying the dental plaque coverage on each tooth of the test subject,

wherein the test subject is a companion animal; wherein the companion animal is a dog, a cat, or a horse."

Claims 2 to 5 are dependent claims.

V. The appellant's arguments relevant to this decision can be summarised as follows.

The subject-matter of claim 1 of the main request was inventive over the cited prior art.

D2 was an inappropriate starting point for inventive step, as it contained no reference to any trial of an oral health product on a dog, cat or horse.

D1, which was concerned with assessing a dental composition in an oral health trial on an animal by detecting and quantifying dental plaque (Example 4, paragraphs [0092] to [0096]), was the closest prior art.

D1 did not disclose a method applied on a conscious animal. This distinguishing feature addressed the problem of providing a safe, effective and objectively reliable method of testing animal oral care products.

Starting from D1, the skilled person would not have consulted D2, as this document related almost entirely to human patients.

Starting from D2, this document did not disclose a method applied to a conscious dog, cat or horse. This distinguishing feature, which addressed the problem of providing a safe, effective and objectively reliable method of testing animal oral care products, was not disclosed in D1 either.

Reasons for the Decision

1. The subject-matter of the application

The independent claim of the main request defines a method of detecting and quantifying dental plaque in a dog, a cat or a horse and is based on page 2, line 19 to page 3, line 9 of the application as filed.

The accumulation of dental plaque can lead to periodontal diseases, which can have severe effects on the well-being of these animals.

The claimed method comprises obtaining one or more images of one or more teeth of a conscious dog, cat or horse using an image taking device that is capable of detecting fluorescence, analysing the images and quantifying the dental plaque coverage on each tooth.

According to the application, the claimed method is advantageous in assessing the efficacy of test compositions in removing and/or controlling plaque, because the animals involved do not need to be anaesthetised, in contrast to what was normally carried out in standard clinical methods (page 2, line 31, to page 3, line 5).

The subject-matter of the dependent claims is based on claims 2 and 4 of the application as filed.

2. Inventive step starting from D2

The main request on appeal corresponds to auxiliary request 1 before the Examining Division, which concluded that the subject-matter of claim 1 of this

request did not involve an inventive step over D2.

2.1 D2 concerns apparatuses for use in periodontitis treatment and diagnosis, and for use in treatment or prevention of infectious diseases (paragraph [0001]).

D2 discloses a method of detecting and quantifying dental plaque in a human, comprising the steps of obtaining one or more images of one or more teeth of a conscious human subject using an image taking device that is capable of detecting fluorescence (paragraphs [0018], [0019], [0115] and [0174] to [0178]); analysing the images (paragraphs [0210] and [0257] to [0259]); and quantifying the dental plaque coverage on each tooth of the test subject (paragraphs [0262], [0267] and [0268]). This is in accordance with the first embodiment, described in paragraphs [0129] to [0309].

D2 discloses further embodiments related to the treatment of periodontitis in humans (second to fifth embodiments disclosed in paragraphs [0310] to [0386]), an embodiment related to the prevention and treatment of arthritis (sixth embodiment disclosed in paragraphs [0387] to [0478], an embodiment related to laparoscopic surgery (seventh embodiment disclosed in paragraphs [0479] to [0523]) and an embodiment for the treatment and relapse prevention of choledocholitiasis, i.e. gallstones in the bile duct (eighth embodiment disclosed in paragraphs [0524] to [0545]). Furthermore, D2 discloses an alternative embodiment about other diseases (paragraphs [0546] to [0555]) according to which antimicrobial PhotoDynamic Therapy (aPDT) can be implemented for treating and preventing infections at a diseased site, where the disease could be sialolithiasis (paragraph [0546]), i.e. stones in a salivary duct or a salivary gland, or urolithiasis

(paragraph [0555]), i.e. stones in the ureter or in the kidneys.

It is in the context of this last alternative embodiment that D2 suggests the use of aPDT "to treat and prevent animal infections as well as human infections" (paragraph [0555]). There is no other mention of applications to animals anywhere else in D2.

2.2 In the light of this teaching, contrary to the Examining Division's conclusion in the impugned decision, it cannot be assumed that D2 directly and unambiguously discloses a method of detecting and quantifying dental plaque in a companion animal. Even less can it be assumed that the companion animal should be conscious during the performance of such method. Hence, the invention does not lie in the mere selection of a specific animal, as affirmed by the Examining Division.

The person skilled in the art would not have found any motivation, from D2 alone, to apply the method for detecting plaque of this document to a companion animal, since D2 is completely silent in this respect.

The other cited documents D1 and D3 do not disclose the application of a method for detecting plaque to a conscious companion animal either.

D1 relates to a dental composition comprising algae for reducing plaque on animal teeth. Although in Example 4 (paragraphs [0092] to [0096]) D1 discloses methods for evaluating plaque indices on animal teeth using Quantitative Laser/Light Fluorescence, these methods are performed on anaesthetised animals, as the appellant argued.

D3 relates to dental care for humans.

It follows that the subject-matter of claim 1 of the main request is inventive (Article 56 EPC) when starting from D2 in view of the cited prior art.

3. Inventive step starting from D1

In view of the fact that D2 does not teach a method of detecting and quantifying dental plaque in animals, the Board shares the appellant's view that the closest prior art for the subject-matter of claim 1 of the main request is D1, which discloses a method of detecting and quantifying dental plaque in animals (Example 4, as mentioned above).

3.1 D1 discloses a method of detecting and quantifying dental plaque in animals by obtaining images of the teeth using an image taking device that is capable of detecting fluorescence (Quantitative Laser/Light Fluorescence).

However, D1 teaches that the animals are to be anaesthetised (paragraph [0094]).

3.2 Hence, D1 does not disclose that the method is applied to a conscious dog, cat, or horse.

This distinguishing feature has the technical effect that the testing of oral health care products for the animals mentioned in the claim can be performed more easily and with less discomfort for the animal under test.

Hence, the objective technical problem solved is how to

provide an effective and safe method of testing oral health care products for various applications.

The person skilled in the art would not have found any motivation, from D1 alone, for the claimed solution of the objective technical problem.

The other cited documents D2 and D3 do not disclose the distinguishing feature either. More generally, neither the cited prior art nor the prior art mentioned in the application (page 2, line 31 to page 3, line 14) teach obtaining images on conscious animals.

It follows that the subject-matter of claim 1 of the main request is inventive (Article 56 EPC) also when starting from the closest prior art D1.

4. In conclusion, the subject-matter of claim 1 of the main request is inventive (Article 56 EPC) over the cited prior art. Hence, the decision under appeal is to be set aside.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Examining Division with the order to grant a patent on the basis of:

   - claims 1 to 5 of the main request, filed with the statement of grounds of appeal on 23 June 2022,

   - Figures 1 to 23C of the application as filed, and

   -a description to be adapted.

The Registrar: The Chairman:

A. Chavinier-Tomsic M. Alvazzi Delfrate

Decision electronically authenticated