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DECISION of 3 February 2004

T 0730/01 - 3.3.1 Case Number:

Application Number: 95305201.6

Publication Number: 0694528

C07C 229/24 IPC:

Language of the proceedings: EN

Title of invention:

(S,S)-Ethylenediamine-N,N'-disuccinic acid iron (III) ammonium salt and process for its preparation

Patentee:

MITSUBISHI RAYON CO., LTD.

Opponents:

Akzo Nobel N.V.

S. Bennett Willis, Mr.

The Associated Octel Company Limited

Headword:

EDDS salt/MITSUBISHI

Relevant legal provisions:

EPC Art. 54

Keyword:

"Novelty (no) - particular combination of features directly disclosed"

Decisions cited:

Catchword:



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Beschwerdekammern

Boards of Appeal

Chambres de recours

Case Number: T 0730/01 - 3.3.1

DECISION

of the Technical Board of Appeal 3.3.1 of 3 February 2004

Appellant: MITSUBISHI RAYON CO., LTD.

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Decision under appeal: Decision of the Opposition Division of the

European Patent Office posted 9 May 2001

revoking European patent No. 0694528 pursuant

to Article 102(1) EPC.

Composition of the Board:

Chairman: A. J. Nuss
Members: R. Freimuth

J. H. Van Moer

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Summary of Facts and Submissions

- I. The Appellant (Proprietor of the Patent) lodged an appeal on 26 June 2001 against the decision of the Opposition Division posted on 9 May 2001 revoking European patent No. 694 528 which was granted on the basis of five claims, independent claim 1 reading as follows:
 - "1. (S,S)-ethylenediamine-N,N'-disuccinic acid iron

 (III) ammonium salt represented by the formula (I)

$$\begin{bmatrix}
NHC^{*}H(CO_{2}^{-})CH_{2}CO_{2}^{-} \\
(CH_{2})_{2} \\
NHC^{*}H(CO_{2}^{-})CH_{2}CO_{2}^{-}
\end{bmatrix}$$

$$+ Fe^{2+} \cdot NH_{4}^{-+} \qquad (I)$$

wherein C* is an asymmetric carbon atom."

- II. Notice of Opposition had been filed by the Respondents I, II and III (Opponents I, II and III), requesting revocation of the patent in its entirety on the grounds of lack of sufficient disclosure, novelty and inventive step (Article 100(a) and (b) EPC). The following document was submitted inter alia in opposition proceedings:
 - (13) JP-A-94-161063, considered in the form of its English translation,
- III. The Opposition Division held that the subject-matter claimed according to the then pending main request and second and fourth auxiliary request was not novel and

that the subject-matter claimed according to the then pending first and third auxiliary request did not involve an inventive step. In respect of document (13) the Opposition Division found that it did not unambiguously disclose the claimed [S,S]-enantiomer of iron(III) ammonium salt of ethylenediamine-N,N'-disuccinic acid (EDDS).

- IV. The Appellant defended the maintenance of the patent in suit on the basis of the claims as granted apart from an amendment to claim 2 and subsidiarily on the basis of the sole claim 1 as granted.
- V. The Respondents objected to the novelty of the salt according to claim 1 in view of document (13). Notwithstanding the absence of the chemical formula of the claimed salt in that document, it individualised that particular salt. Paragraph [0149] of document (13) specifically disclosed Fe(III) ammonium salts of a compound of Table 1 which table listed on page 11 EDDS (No. I-1). Paragraph [0028] specified that this compound (I-1) included the tree optical isomers [R,R], [S,S] and [S,R] while paragraph [0029] solely indicated the [S,S] isomer as being preferred. This amounted to a selection within one list only, namely the list of Table I, without generating a fresh combination of features. Since the presence of hydrate water within the disclosed salt was not specifically indicated in document (13) it was necessarily absent.
- VI. The Appellant disputed the Respondents' objection of lack of novelty. He took the view that document (13) did not anticipate the claimed subject-matter since it disclosed in paragraph [0149] Fe(III) ammonium salts

without referring to any specific chelating molecule, in the present case EDDS, and without individualising the [S,S] isomer thereof. To arrive at the salt claimed it was necessary to select particular features within at least two separate lists with the consequence that this particular combination of features was not directly disclosed in that document. Furthermore, paragraph [0149] was silent about the number of Fe(III) and ammonium cations included in the salt. Moreover, document (13) did not specify explicitly the absence of hydrate water within the salt.

VII. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request submitted on 4 December 2003 or on the basis of the sole claim submitted as auxiliary request on 30 January 2004.

The Respondents requested that the appeal be dismissed.

VIII. Oral proceedings before the Board were held on 3 February 2004 in the absence of the Respondent I who, after having been duly summoned, did not attend. At the end of the oral proceedings the decision of the Board was given orally.

Reasons for the Decision

1. The appeal is admissible.

- 2. Novelty
- 2.1 Independent claim 1 according to the main request and claim 1 according to the auxiliary request are identical; it is claim 1 as granted (cf. point I above). Therefore the Board's considerations having regard to the novelty of that claim as well as the conclusion drawn therefrom necessarily apply to either request. For this reason it is appropriate to examine first whether or not the subject-matter of claim 1 is anticipated.
- 2.2 The Board observes that it is a generally applied principle for concluding lack of novelty, that there must be a direct and unambiguous disclosure in the state of the art which would inevitably lead the skilled person to subject-matter falling within the scope of what is claimed.
- 2.3 In the present case, document (13) discloses in paragraph [0149] a "Fe(III) ammonium salt of a compound shown in Table 1". That Table 1 lists in paragraphs [0023] to [0027] 25 equivalent alternative compounds wherein EDDS is the first compound having the number (I-1). To that extent there is no dispute between the Appellant and the Respondents. Document (13) explicitly indicates furthermore in paragraph [0029], second line with respect to "the present invention" that "[S,S] is preferable to other optical isomers" thereby pointing directly to this sole optical isomer. Therefore the particular combination of the Fe(III) ammonium salt of EDDS in [S,S] form results from a selection within one single list only, namely from the list of "compounds shown in Table 1", while a selection was neither needed

nor possible for the skilled person in respect of the particular optical isomeric form [S,S] as this form is the sole preferred one, no alternative preferences being given in document (13).

Applying the above stated principle (cf. point 2.2) in the present case, thus, results in the conclusion that document (13) directly points to and unambiguously discloses the [S,S] EDDS iron(III) ammonium salt as defined in claim 1 of either request with the consequence that it is detrimental to the novelty of the subject-matter of that claim.

2.4 In support of novelty the Appellant argued that paragraph [0149] was silent about the number of Fe(III) and ammonium cations included in the salt thereby implying that the disclosed term "Fe(III) ammonium salt" could also include more than one Fe(III) and/or ammonium cation while the claimed salt comprised exclusively one of each.

However, claim 1 uses the same chemical term as does document (13), namely "iron(III) ammonium salt" (see point I above). By definition, identical chemical terms indicate the same chemical compound with the consequence that the salt disclosed in this document cannot differ as to the number of Fe(III) and/or ammonium cations included therein from that as defined in claim 1. Hence, it results from the identity of the chemical nomenclature that the Appellant's speculations are devoid of any merit.

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2.5 Moreover, the Appellant argued that it was necessary to select particular features within at least two separate lists to arrive at the salt claimed with the consequence that this particular combination of features was not directly disclosed in document (13).

However, as set out earlier, the [S,S] isomeric form is the only preferred one specifically disclosed in paragraph [0029], no alternative having been indicated to the skilled reader. Therefore, there was no selection to be made in respect of the isomeric form. Thus, the Appellant's allegation is not supported by the facts.

2.6 The Appellant argued also that in paragraph [0029] of document (13) the form [S,S] was preceded by the term "like" thereby, so the Appellant, weakening that disclosure.

However, the Appellant's argument does not alter the fact already established in point 2.3 above, namely that this paragraph directly points to that sole isomeric form by the wording "[S,S] is preferable to other optical isomers". Thus, paragraph [0029] of document (13) is directed to the exclusive preference of the [S,S] form without any ambiguity as the skilled reader is not presented with any alternative preference. Therefore that argument cannot convince the Board.

2.7 Furthermore, the Appellant brought forward that document (13) did not explicitly specify the absence of hydrate water within the salt whereas there was no hydrate water present in the salt according to claim 1.

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However, the chemical name and the chemical formula of the salt, both given in claim 1 specify the absence of hydrate water neither. This is in line with chemical nomenclature which, as a rule, indicates exclusively what is present in a molecule and not what is absent therefrom. This principle of chemical nomenclature has been followed in present claim 1 as well as in the prior document (13) with the consequence that to that extent there cannot be any difference between the claimed salt and that disclosed in this document. Therefore, the Appellant's argument is beside the point.

- 3. The Board concludes from the above that document (13) destroys the novelty of claim 1 according to either request.
- 4. In these circumstances, the Appellant's main and auxiliary request are not allowable for lack of novelty pursuant to Articles 52 (1) and 54 (1),(2) EPC and must be rejected.

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Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

N. Maslin A. Nuss