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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte YASUNORI MIZUSHIMA and HARA KU KUBO

Appeal 2022-003863
Application 16/310,225
Technology Center 1700

Before KAREN M. HASTINGS, MICHAEL P. COLAIANNI, and
CHRISTOPHER C. KENNEDY, *Administrative Patent Judges*.

HASTINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 3, 5–9, and 14. *See* Final Act. 1. An oral hearing was held on Dec. 9, 2022. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 (2022). Appellant identifies the real party in interest as DIC Corporation. (Appeal Br. 2).

CLAIMED SUBJECT MATTER

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A coloring material comprising a protein-based pigment and a chelating agent,
the protein-based pigment including one or more compounds selected from the group consisting of a chlorophyll-protein complex, a carotenoid-protein complex, and a phycobiliprotein,
the content of the protein-based pigment in the coloring material being 5% by mass or more and 90% by mass or less, the content of the chelating agent in the coloring material being 10% by mass or more and 95% by mass or less, with the content of solid components in the coloring material being 100% by mass,
wherein the chelating agent includes at least one compound selected from the group consisting of citric acid, malic acid, ethylenediaminetetraacetic acid, and salts of citric acid, malic acid, and ethylenediaminetetraacetic acid, and
wherein the coloring material is a powder.

Claims Appendix 10.

REFERENCE

The prior art relied upon by the Examiner is:

Name	Reference	Date
Ratana Chaiklahan et al.	<i>Stability of Phycocyanin Extracted from Spirulina sp.: Influence of Temperature, PH and Preservatives</i> 47 Process Biochemistry 659–664 (2012)	Jan. 9, 2012

REJECTION

Claims 1, 3, 5–9, and 14 are rejected under 35 U.S.C. § 102(a)(1) as being anticipated by Chaiklahan. Final Act. 3.

OPINION

We have reviewed Appellant's arguments for patentability. However, we determine that a preponderance of the evidence supports the Examiner's finding that the claimed subject matter of representative claim 1 is anticipated within the meaning of § 102 in view of the applied prior art of Chaiklahan. Accordingly, we will sustain the Examiner's rejection for essentially those reasons expressed in the Final Action and the Answer, and we add the following primarily for emphasis.

Appellant's main argument is that Chaiklahan does not describe, within the meaning of § 102, a powder of phycobiliprotein with one of the recited chelating agents (i.e., citric acid) of independent claim 1. Specifically, Appellant points out that the only examples of phycocyanin (a phycobiliprotein) powders that were subjected to investigation by a scanning electron microscope included NaCl or sucrose as the preservative, not citric acid as relied upon by the Examiner (Chaiklahan Fig. 5; Appeal Br. 4–7). Appellant further argues that the main purpose of Chaiklahan is to determine preservatives for stabilizing phycocyanin in a solution versus a powder (Appeal Br. 7–9). Appellant also states that it was unexpected that citric acid resulted in better stability of phycocyanin in powder form as compared with NaCl (Appeal Br. 9).

Appellant's arguments are not persuasive of reversible error in the Examiner's anticipation rejection.

As the Examiner points out in the Answer, Chaiklahan explicitly describes that the preservative may be citric acid, and thus when read as a whole does fairly describe a powder within the scope of claim 1 (e.g., Ans. 5, 6 relying on Chaiklahan sections 2.2 and 2.4). It is clear from a fair

reading of the relied upon passages of Chaiklahan that an embodiment is being described where the preservative may be any of those listed in section 2.2, including citric acid. A preponderance of the evidence supports the Examiner’s position that one of ordinary skill in the art would have readily recognized or inferred that the phycocyanin (phycobiliprotein) powder with a preservative (i.e., citric acid) described in Chaiklahan is indeed encompassed by the claim language in dispute (Ans. 3–6). *In re Preda*, 401 F.2d 825, 826 (CCPA 1968) (In determining whether a reference anticipates the subject matter recited in a claim, “it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.”); *cf. In re Schaumann*, 572 F.2d 312, 317 (CCPA 1978) (In order to anticipate, a reference must identify something falling within the claimed subject matter with sufficient specificity to constitute a description thereof within the purview of § 102).²

² With respect to Appellant’s alleged unexpected result (Appeal Br. 9; Spec. 40, Table 2, Example 7), it is well established that a showing of unexpected results cannot be used to overturn an anticipation rejection. But in any event, Appellant’s alleged unexpected result is not commensurate in scope with the claim, given that the claim encompasses amounts of citric acid from 10% to 95% by mass, the claim is not even limited to citric acid, and the claim is open to unrecited ingredients. Per *In re Clemens*, 622 F.2d 1029, 1035 (CCPA 1980), the “objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.” (Citation omitted.). See also, *In re Lindner*, 457 F.2d 506, 508 (CCPA 1972) (“It is well established that the objective evidence of nonobviousness must be commensurate in scope with the claims.”)

Thus, a preponderance of the evidence supports the Examiner's position that one of ordinary skill in the art would have at once envisaged or inferred from Chaiklahan's disclosure that a coloring material as recited in independent claim 1 is indeed described therein (Ans. *generally*).

Accordingly, we affirm the Examiner's anticipation rejection.

CONCLUSION

The Examiner's rejection is AFFIRMED.

DECISION SUMMARY

In summary:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3, 5–9, 14	102	Chaiklahan	1, 3, 5–9, 14	

RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2022). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2022).

AFFIRMED