

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RIMFROST AS

Petitioner

v.

AKER BIOMARINE ANTARCTIC AS

Patent Owner

Case No.: IPR2018-01179

U.S. Patent No. 9,375,453

Issue Date: June 28, 2016

Title: Bioeffective Krill Oil Compositions

**PETITIONER'S SUR-REPLY TO PATENT OWNER'S
MOTION TO AMEND**

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I. INTRODUCTION

Patent Owner does not dispute that the steps of “grinding, cooking and drying” krill were known in the art. Nor does Patent Owner dispute that Yoshitomi expressly discloses these steps, and teaches the benefits of denaturing krill. Nevertheless, by pointing to three values taken from Yoshitomi’s specification, and relying on Dr. Hoem’s unsupported speculation regarding acid and peroxide values, Patent Owner attempts to limit Yoshitomi’s disclosure to a single krill powder it names “YKP.” Patent Owner also tries to rewrite the proposed claims to recite a method of producing a “phospholipid-rich krill oil” extracted from krill meal that is not subjected to any hydrolytic or oxidative degradation. Contrary to Patent Owner’s arguments, Yoshitomi expressly discloses and teaches grinding, cooking and drying fresh krill which, in combination with the other prior art of record, renders claims 75-84 unpatentable.¹

II. THE PROPOSED CLAIMS FAIL TO COMPLY WITH SECTION 112

It is not contested that the term “grinding” can only be found in a single sentence, branded as one of over 175 so-called “embodiments” supposedly

¹ Patent Owner refuses to address why Yoshitomi was not mentioned in its MTA or why that omission did not violate its duty of candor. 37 C.F.R. § 42.11; *see* Petitioner’s Opposition (Paper 19) (“Opp.”), p. 2, n.2.

described in the '162 application. The only reason Patent Owner offers why this isolated reference satisfies the written description requirement of Section 112 is that the proposed “grinding, cooking and drying” steps were known in the art. PO Reply, 3. That the steps of “grinding, cooking and drying” krill were known and obvious, however, is insufficient to satisfy Section 112’s written description requirement. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (“a description that merely renders the invention obvious does not satisfy” the written description requirement). Patent Owner has failed to meet its burden with respect to the written description requirement and the proposed “grinding, cooking and drying” limitation. Patent Owner’s MTA should be denied.

Patent Owner feigns uncertainty as to why the proposed claims are also indefinite under Section 112. PO Reply, 3, n.1.² Since the recited ether phospholipid and non-ether phospholipid values only add up to a minimum of 31% and a maximum of 58% (*i.e.*, 4-8% ether phospholipids + 27-50% non-ether phospholipids), it is mathematically impossible to achieve either the minimum or maximum total phospholipid limitation. The proposed claims are also indefinite.

² Patent Owner wrongly avers that collateral estoppel bars Petitioner from arguing that proposed claims 75-84 are indefinite. Petitioner, however, never raised, and the Board never addressed, the issue of indefiniteness in IPR2018-00295.

III. THE PROPOSED CLAIMS ARE UNPATENTABLE

A. A POSITA Would Have Motivated To Use The “Grinding, Cooking And Drying” Process Described In Yoshitomi

Patent Owner tries to limit the scope of Yoshitomi’s disclosure to a single “krill powder” it names “YKP,” and then maintains that YKP is an unacceptable product because it was purportedly subject to excessive hydrolytic and oxidative degradation and has an abnormally low level of lipids, relying on Dr. Hoem’s unsupported suppositions regarding the acid and peroxide values and “course fat” values found in Tables 3 and 5, respectively; values that are acceptable for commercial krill oil products. PO Reply, 4; *infra*, p. 7. Patent Owner concludes that a “POSITA would not choose to combine Yoshitomi with the other cited references for the production of a krill oil.” PO Reply, 6. Patent Owner’s arguments are meritless.

Yoshitomi repeatedly and unambiguously describes grinding (*i.e.*, chopping or coarsely crushing), cooking (*i.e.*, heating) and drying fresh *Euphausia superba* krill to produce a denatured krill powder containing “all the components” of fresh krill. *See, e.g.*, Exhibit 1033, Abstract; ¶¶ 0009, 0021-0023, 0025, 0029, 0032-0034, 0037, 0041, 0049, 0051, 0055. It is noted that excessive cooking and drying temperatures “reduces astaxanthin . . . present in krill, reduces vitamins and oxidizes lipids.” *Id.*, ¶ 0034. Yoshitomi, however, discloses that one of the benefits associated with grinding or chopping krill into smaller pieces is improved

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