

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RIMFROST AS

Petitioner

v.

AKER BIOMARINE ANTARCTIC AS

Patent Owner

Case: IPR2020-01534

U.S. Patent No. 10,010,567 B2

DECLARATION OF DR STEPHEN J. TALLON

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“krill oil” means “lipids extracted from krill”56

“astaxanthin” means “the astaxanthin molecule having the structure shown below and includes both cis- and trans forms of the molecule:.....62

“astaxanthin esters” means “astaxanthin molecules in which one or both of the hydroxyl groups are replaced by a fatty acid tail connected to the astaxanthin molecule through an ester bond.”68

“phytonutrient” means “plant-derived compound that has a positive impact on human health or nutrition”69

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A POSITA would have known to concentrate the Phospholipid (PL) content of the krill oil, e.g., by removing Neutral Lipids (NLs), to increase the omega-3 fatty acids as a percentage of total fatty acids as omega-3 fatty acids were known to be preferentially attached to the phospholipids.104

Fatty acids make up 72% and 95% of the weight of the krill Phospholipids and Neutral Lipids, respectively.105

Bottino II teaches that 97% of the omega-3 fatty acids are attached to the Phospholipids in krill lipids.108

Reduction of Neutral Lipids content to 20%, with an increase in Phospholipids content to 80% leads to a krill oil with 37.4% weight percent of omega-3 fatty acids as a percent of total fatty acids.....109

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Removal of Neutral Lipids would reduce the level of free fatty acids.....113

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“isolating the lipid fraction” means “separating, including by extracting, the
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