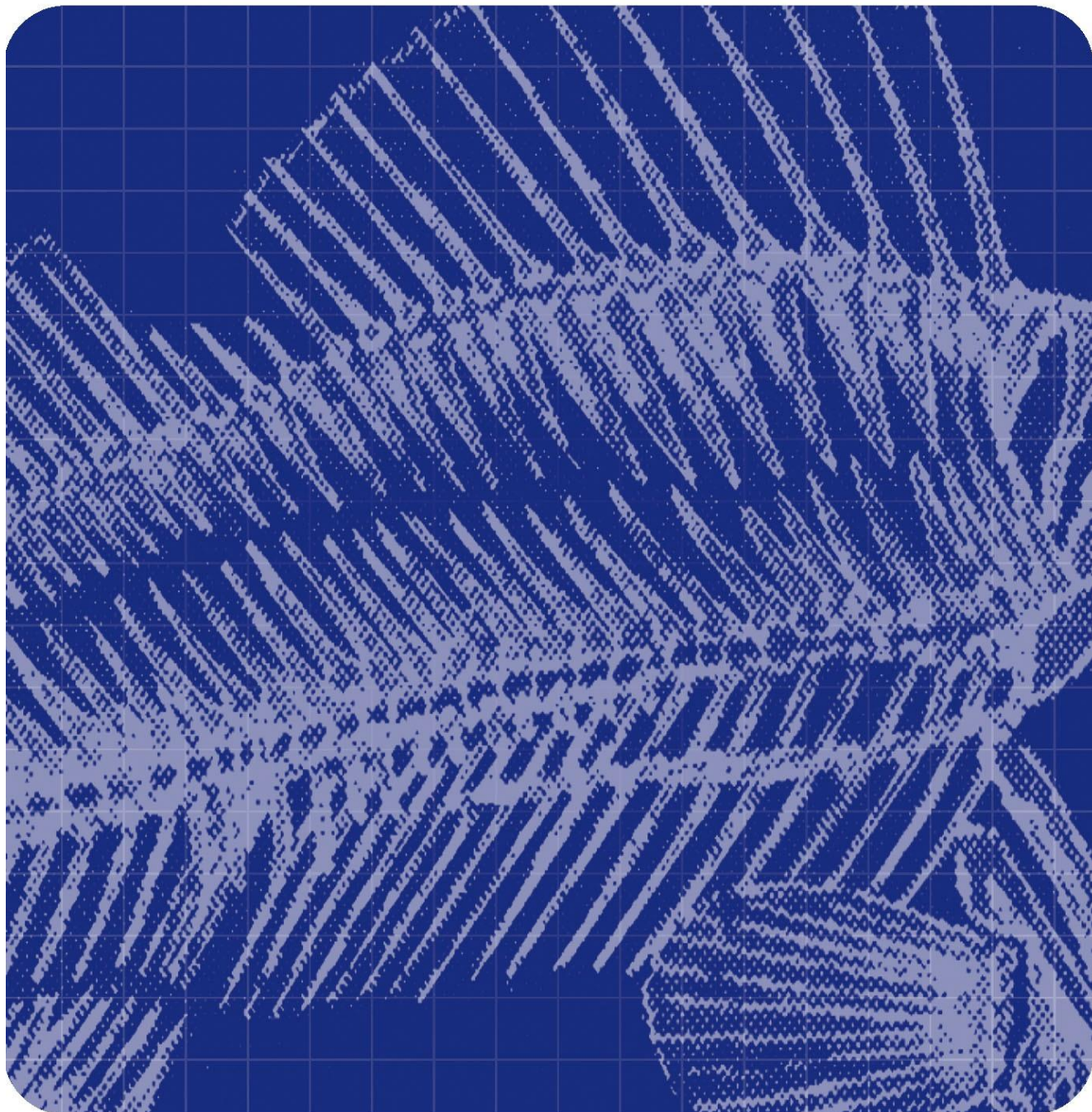




Extraction of krill meal with ethanol

Eyolf Langmyhr





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<i>Summary:</i> Krill meal has been extracted with ethanol at Fresenius Kabi, Sweden. 94 % of the lipids in the krill meal are extracted in the process. The protein quality of the krill meal has not changed in the extraction process. The flow of the krill meal is greatly improved by the extraction. Only 23 % of the astaxanthin is recovered. The greatest loss seems to be during the removal of solvent from the extracted lipid. Krill meal treated with ethoxyquin should not be used for extraction as the antioxidant may accumulate in the solvent.	

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1 MATERIAL AND METHODS

Krill meal, 3210 kg (107 bags á 30 kg) produced on board F/V Atlantic Navigator 06.05.05, was extracted with ethanol at Fresenius Kabi, Kungsängen, Sweden.

The analytical methods is described in Fiskeriforskning Report K-300 “F/T Atlantic Navigator 2004-2005” and in Fiskeriforskning Report K-308 “Extraction of krill meal at Extractis”.

2 EXTRACTION

The aim of the extraction was to test ethanol as extraction medium in Fresenius Kabi’s extraction unit for the production of marine phospholipids.

From 3200 kg krill meal they got 660 kg crude krill lipid and 2500 kg delipidated krill powder. The krill lipid was dark red liquid with high viscosity. The colour of the krill powder was light red and it smelled of ethanol. The time and temperature of the extraction are not given.



Figure 1 Krill meal before and after extraction

3 ANALYTICAL RESULTS

By using ethanol to extract lipids from krill meal, only a small part of the lipid is left in the extracted krill meal (Table 1).

The delipidated krill powder smelled of ethanol, so it is likely that the weight loss at drying is mostly ethanol.

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