

## ニタリクジラ油の脂肪酸組成分析とその利用法

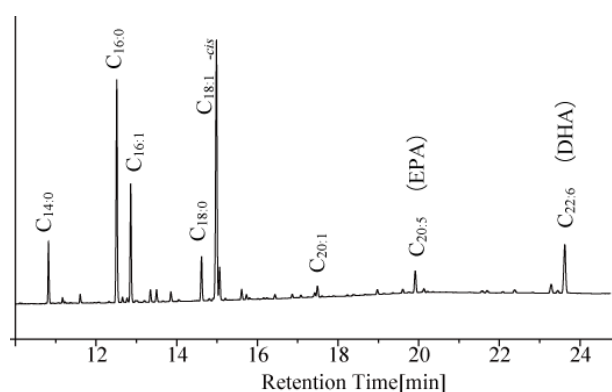
(山口県産技セ<sup>1</sup>・下関市立大都市みらい機構<sup>2</sup>・吉田総合テクノ<sup>3</sup>) ○岩田 在博<sup>1</sup>・小川 友樹<sup>1</sup>・岸本 充弘<sup>2</sup>・吉田 幸治<sup>3</sup>・吉田 治重<sup>3</sup>

Fatty Acid Composition of Bryde's Whale Oil and Their Utilization (<sup>1</sup>Industrial Technology Support Department, Yamaguchi Prefectural Industrial Technology Institute, <sup>2</sup>Institute for Future Urban Creative strategy, Shimonoseki City University, <sup>3</sup>Yoshida Sogo Techno Co., Ltd.)  
○Arihiro Iwata,<sup>1</sup> Tomoki Ogawa,<sup>1</sup> Mitsuhiro Kishimoto,<sup>2</sup> Kouji Yoshida,<sup>3</sup> Harushige Yoshida<sup>3</sup>

The fatty acid composition of Bryde's whale (*Balaenoptera edeni*) oil obtained in 2019 through commercial whaling in 2019 was measured and compared with the reference captured in 1979. We observed that the measured ratios of long-chain fatty acids were higher than the values in the previous study. Approximately 1.5 times the ratio of poly unsaturated fatty acids (PUFA) was detected compared to the values in the previous study. This oil is expected to have applications as a new material for in the field of healthy food. Hydrogenated Bryde's whale oil was prepared by the reaction of while oil with hydrogen in the presence of palladium catalysis. In this study, the situation of research and technology transfer in the field of application of whale oils collaboration between government, industry, and academia was described.

**Keywords :** Whale Oil; Fatty Acid; Hydrogenation; PUFA

大型鯨類の商業捕鯨が令和元年に再開され、山口県下関市が母船式捕鯨（沖合域）拠点に選定された。主に捕獲されるニタリクジラの皮等から搾油、精製した鯨油の脂肪酸組成を分析したところ、過去の文献値よりも高度不飽和脂肪酸の含有量がおおよそ1.5倍ほど高いことが分かった<sup>1)</sup>。高度不飽和脂肪酸を活用したサプリメントの開発が期待される。鯨油の臭気の低減と化学的安定性の向上を目的としてパラジウム触媒を用いた水素添加反応を行った<sup>2)</sup>。水素添加鯨油の化粧品等への活用法の提案など、下関地域での産官学連携の取り組みを紹介する。



1) A. Iwata, T. Ogawa, M. Kishimoto, K. Yoshida, and H. Yoshida: Fatty Acid Composition of Bryde's Whale Oil, *Japan Cetology*, **31**, 1-4 (2021)

2) 岩田在博、小川友樹、岸本充弘、吉田幸治、吉田治重、中司武敏、岸本充弘、山口県産業技術センター研究報告, **33**, 20-22 (2021)