

〈原 著〉

## エマルション中添加物の酸化安定性に関する研究(2) レモン油の安定性に及ぼすアルキルエーテル系界面活性剤の影響

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### Studies on the Oxidative Stability of Additive Materials in Emulsion.(2). Effects of Alkyl Ether Surfactants on Stability of Lemon Oil

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In the previous paper of this series,<sup>1)</sup> the authors investigated the effects of sorbitan ester type surfactants on the oxidative stabilities of lemon oil in emulsion.

The results showed that sorbitan ester type surfactants inhibited strongly the oxidation to the lemon oil in emulsion.

In the present paper, the effects of alkyl ether type surfactants on the oxidative stabilities of lemon oil in emulsion were investigated according to the previous methods.<sup>1)</sup>

The results were as follows.

- 1) Alkyl ether type surfactants strongly accelerate oxidation.
- 2) The larger value of hydrophile lipophile balance (HLB) of alkyl ether type surfactants accelerate the oxidation than smaller one.
- 3) The lower value on the interfacial tensions of the mixed alkyl ether type surfactants accelerate oxidation than the higher one.
- 4) The effects of critical micell concentration(cmc) of the surfactants on the oxidation were identified.
- 5) Lemon oil in W/O emulsion was easily oxidized, but in O/W emulsion was oxidized only a little.
- 6) Emulsified lemon oil by alkyl ether type surfactants were oxidized, but by sorbitan ester surfactants were not.