

〈原著〉

ヨウ素価測定に影響する要因¹⁾

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Factors Influencing to Iodine Values

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Abstract

The reported iodine values of substances having polyoxyethylene chain in structures such as poly-sorbate 80, has shown to be widely varied according to each doing the test. The complex-formation of polyoxyethylene chain and iodine or the emulsification with an addition of potassium iodine and purified water after reaction could be attributable to the variable iodine values among the published reports. Therefore, the standard procedure for iodine value determination which has standardized for triglyceride such as olive oil is not suitable for polyoxyethylene derivatives.

In the present investigation, we found that by using automatic potentiometric titration apparatus, Wijs solution and CHCl_3 were best combination for the determination iodine values of polyoxyethylene derivatives.

In general, amounts of sample are increased when the iodine values of sample are low. We found that iodine values were reproduced by decreasing Wijs solution volume rather than increasing amounts of sample, and also time consumption of the measuring could be saved.

Key Words

iodine values; Wijs method; automatic potentiometric titration; polyoxyethylene derivatives