Exp.14 Iodine Value of Fats

Introduction:

The iodine value (IV) or iodine number (IN) gives a measure of the average degree of unsaturation of a lipid.

Determination of Iodine Number (Hanus) ---

The iodine number (I_2 No.) is defined as the grams of I_2 which will add to the double bonds of 100 grams of lipids.

Reagents:

1. Fats
2. Glacial acetic acid
3. Hanus iodine solution
4. 2.5% Mercuric acetate
5. 20% KI
6. ~0.05M $Na_2S_2O_3$
7. 1% Starch

Procedure:

Weigh accurately ~0.1g of unknown oil in a clean, dry 250 ml Erelenmeyer flask. For a blank analysis, use 10ml gl.HOAc only. Pipette accurately 6ml of Hanus iodine solution、3ml of 2.5% mercuric acetate(Hg^{++} accelerates the reaction) into the flask and place in the dark for at least 15 min or longer if more convenient . Add 1.5ml 20% KI, then titrate with ~0.05M $Na_2S_2O_3$ rapidly with adequate mixing to a yellow color. Then add 1 ml of 1% starch and titrate to the

disappearance of the blue color. Calculate and report the results.

Results：

1. Record your observations.
2. Calculate iodine value.

Discussions：