

Determination of iodine value (IV) in fats and oils

Iodine value (IV) is a measure of the total number of double bonds present in fats and oils. It is expressed as the «number of grams of iodine that will react with the double bonds in 100 grams of fats or oils». The determination is conducted by dissolving a weighed sample in a non-polar solvent such as cyclohexane, then adding glacial acetic acid. The double bonds are reacted with an excess of a solution of iodine

monochloride in glacial acetic acid («Wijs solution»). Mercuric ions are added to hasten the reaction. After completion of the reaction, the excess iodine monochloride is decomposed to iodine by the addition of aqueous potassium iodide solution, which is then titrated with standard sodium thiosulfate solution.

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