INTERNATIONAL STANDARD

ISO 3656

Second edition
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Animal and vegetable fats and oils — Determination of ultraviolet absorbance

Corps gras d'origines animale et végétale — Détermination de l'absorbance dans l'ultraviolet

Reference number
ISO 3656 : 1989 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3656 was prepared by Technical Committee ISO/TC 34, *Agricultural food products.*

This second edition cancels and replaces the first edition (ISO 3656 : 1977), of which it constitutes a technical revision.

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Introduction

Conjugated dienes show a wide absorption band in the ultraviolet region at about 232 nm. Conjugated trienes show a triple absorption band in the neighbourhood of 268 nm. Oxidation products of unsaturated fatty acids, if they have a conjugated diene structure (for example, linoleic hydroperoxide), absorb at about 232 nm. Secondary oxidation products absorb at about 268 nm.

Therefore, the determination of absorbance at about 232 nm or at about 268 nm permits the detection and evaluation of conjugated oxidation products and, in some cases, a determination of the conjugated polyenic fatty acids content.

It should be noted that dark-coloured oils (e.g. dark palm oils) having a high carotene content will exhibit absorption at 268 nm to 270 nm.

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