

Methods of analysis of
Fats and fatty oils —

Part 1: Physical methods —

**Section 1.15 Determination of
ultraviolet absorbance**

IMPORTANT NOTE. It is essential that BS 684-0, which is published separately, be read in conjunction with this Section.

National foreword

This revision of Section 1.15 of BS 684 has been prepared under the direction of the Food and Agriculture Standards Policy Committee. It is identical with ISO 3656:1989 “*Animal and vegetable fats and oils — Determination of ultraviolet absorbance*” published by the International Organization for Standardization (ISO), and in the preparation of which the United Kingdom played a full part. This revision supersedes BS 684-1.15:1978 which is withdrawn and from which it differs principally in that calculation of the results as triene or quotient values is not given.

Cross-references

International Standard	Corresponding British Standard
ISO 661:1989	BS 684 <i>Methods of analysis of fats and fatty oils</i> Part 0:1989 <i>General introduction</i> Appendix B (Identical)
ISO 5555:1983	BS 627:1982 <i>Methods for sampling animal and vegetable fats and oils</i> (Technically equivalent)

Additional information. 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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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 and 2, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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