

Indian Standard

ANIMAL FEEDING STUFFS—DETERMINATION OF THE CONTENT OF FATTY ACIDS

PART 1 PREPARATION OF METHYL ESTERS

1 Scope

ISO/TS 17764 specifies methods for the quantitative determination of individual fatty acids and of the sum of the fatty acids (elutable fatty acids).

This part of ISO/TS 17764 specifies two methods for preparing the methyl esters of fatty acids of animal and vegetable fats, oils and fatty acid mixtures for raw materials for compound animal feeds, and fatty acids originating from fat extracts of animal feeding stuffs, including fats and fatty acid mixtures containing butyric acid.

The general method, the boron trifluoride (BF₃) method, is concerned with the preparation of methyl esters of fatty acids with six or more C atoms, originating from fats, oils and free fatty acids.

The KOH/HCl method is concerned with the preparation of methyl esters of fatty acids with four or more C atoms. This method can also be used for the quantitative determination of fatty acids with a chain length shorter than ten C atoms in free fatty acid mixtures.

The methyl esters produced can be used for gas-liquid chromatography (GLC).

NOTE 1 Unsaponifiable materials are not removed and can, when present in considerable amounts, interfere with the chromatographic analysis.

NOTE 2 ISO/TS 17764-2 describes the application of gas chromatography with capillary columns and flame ionization detection for the determination of the content of fatty acids in a fat by making use of the methyl esters of the fatty acids obtained in accordance with the methods specified in this part of ISO/TS 17764.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- ISO 661:1989, *Animal and vegetable fats and oils* □ *Preparation of test sample*
- ISO 3696 :1987, *Water for analytical laboratory use* □ *Specification and test methods*
- ISO 6492 :1999, *Animal feeding stuffs* □ *Determination of fat content*