Animal and vegetable fats and oils — Gas chromatography of fatty acid methyl esters — Part 3: Preparation of methyl esters using trimethylsulfonium hydroxide (TMSH)
0.1 National Foreword

The Tanzania Bureau of Standards is the statutory national standards body for Tanzania, established under the Act No.3 of 1975, amended by Act No 2 of 2009.

This draft Tanzania standard is being prepared by the Fats and Oils Technical Committee, under the supervision of the Food and Agriculture Divisional Committee (AFDC).

This draft Tanzania Standard is the identical adoption of ISO 12966-3:2016 Animal and vegetable fats and oils — Gas chromatography of fatty acid methyl esters — Part 3: Preparation of methyl esters using trimethylsulfonium hydroxide (TMSH) published by International Organization for Standardization.

0.2 Terminology and conventions.

The text of the International standard is hereby being recommended for approval without deviation for publication as draft Tanzania standard.

Some terminology and certain conventions are not identical with those used as Tanzania Standard; attention is drawn to the following:

The comma has been used as decimal marker or metric dimensions. In Tanzania, its current practice to use a full point on the baseline as decimal marker.

Whenever the words “International Standard” appear, referring to this draft standard, they should read as “Tanzania Standard”.

0.3 Scope

This part of ISO 12966 specifies a rapid base-catalysed transesterification method for fats and oils with trimethylsulfonium hydroxide (TMSH) to prepare fatty acid methyl esters. The method is exclusively applicable to the preparation of methyl esters of fats and oils for gas liquid chromatographic (GLC) analysis. It is applicable to all fats and oils, but excluding those coming from milk and milk products. Isomerization of unsaturated fatty acids only occurs to a minor extent and isomerized fatty acids are only present at the determination limit. As isomerization takes place, the procedure is not recommended for conjugated linoleic acid (CLA).

Only about 70% to 80% of the free fatty acids are esterified. In the case of conjugated cyclopropyl and cyclopropenyl fatty acids, side reactions may occur, but these do not interfere with the determination of the fatty acids.