AMENDMENT NO : 01 APPROVED ON 2016-10-06 TO SLS 1427 : 2011

SPECIFICATION FOR FAT SPREAD AND BLENDED FAT SPREAD

EXPLANATORY NOTE

This amendment is issued after the decision taken by the special meeting to discuss the method of test for Acidity, as oleic acid (Appendix **E** of **SLS 1427:2011**).

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Appendix E

Delete the method of test and substitute following:

APPENDIX E
DETERMINATION OF ACIDITY

E.1 REAGENTS

E.1.1 *Diethyl ether***,** 95%

E.1.2 *Standardized sodium hydroxide or potassium hydroxide*; 0.01mol/l

E.1.3 *Phenolphthalein, solution in ethanol*; mass concentration 1g/100ml

E.1.4 *Water*

E.2 APPARATUS & GLASSWARE

E.2.1 *Analytical balance;*

E.2.2 *Beaker*; 100-ml with beak

E.2.3 *Burette*; capacity 25-ml, Graduated in 0.05ml class A

E.2.3 *Conical flask*; 100-ml

E.2.4 *Desiccator*; containing an efficient desiccant

E.2.5 *Drying oven;* maintained at 103 º C ± 2 º C

E.2.6 *Evaporating basin (150 ml) with glass beads;*

E.2.7 *Two separating funnels***;** 250- ml

E.2.8 *Water bath*

E.3 PROCEDURE

E.3.1 Weigh around 25 g of the sample prepared in accordance with **9.1** into a beaker**.**

E.3.2 Transfer the sample into dry separating funnel using approximately 75 ml of diethyl ether (Properly wash the beaker with diethyl ether).

E.3.3 Mix properly and allow to settle.

E.3.4 Collect the ether layer into an another dry separating funnel.

E.3.5 Repeat the extraction procedure for aqueous layer using two successive portions of diethyl ether.

E.3.6 Collect diethyl ether layer (**E.3.5**) to the same separating funnel(**E.3.4**) .

E.3.7 Pass the combined ether layer (**E.3.6**) though anhydrous sodium sulphate into a pre-weighed evaporating basin or pre-weighed rotary flask .

E.3.8 Evaporate diethyl ether (**E.3.7**) at reduced pressure using Rotary vacuum or similar evaporator at ambient temperature (30-32 ^{0}C).

E.3.9 Cool in a desiccator and take the weight of extracted oil.

E.3.10 Carry out the analysis as per the method 1 or method 2 given below.

E.3.10.1 *Method 1*

Weigh around 3-5 g of extracted oil into a conical flask. Add 50 ml of ethanol (containing 0.5 ml of phenolphthalein Neutralized ethanol) mix and titrate with 0.01 mol/l NaOH . Carry out analysis in duplicate.

E.3.10.2 *Method 2*

Carry out analysis in accordance with clause **9** of **SLS 313 : Part 2: Section 6:2009.**

E.4 CALCULATION

$$\text{Free fatty acid per cent} = \frac{VCM \times 100}{1000 \times m}$$

where,

V is the volume, in millitres, of the volumetric sodium or potassium hydroxide solution used;
C is the concentration, in moles per litre, of the standard volumetric sodium or potassium hydroxide solution used;
M is the molar mass of oleic acid in grams;
m is the mass, in grams of the test portion.