



NQAC

Nestlé Quality Assurance Center  
Dublin

# Technical Datasheet

**Analysis Name:** Fat by NMR

**Method Number:** NQA-55.0001

**Scope of Application:** Sweetened Condensed Milk, Evaporated Milk,  
Powders containing <10% moisture

**Description:** Total Solids:  
Test is carried out by weighing and spreading a homogeneous test portion onto a glass fiber pad. Removal of water (moisture) present in the test portion is carried out by drying in an air oven, to dissipate any hydrogen bound in the sample as water. The remaining sample mass is total solids. This result is reported as Total Solids, expressed as g/100 g of sample.

Total Fat:  
The pre-dried sample is then inserted into the low-resolution Oracle NMR spectrometer. The signal arises mainly from the residual fat in the sample. Unwanted signals arising from protein or sugar that may be present in the sample are suppressed by using the correct delay period. This delay time is set by the manufacturer and is not adjustable by the user. The signal intensity of the fat-specific protons is measured and analyzed by the system's software to determine the amount of fat contained in the sample. This result is expressed as g/100 g of sample.

**Sample Weight Required:** 25 g

**Analytical Platform:** NMR

Analyte Reported	Matrix	Alias	Unit of Measure	Limit of Quantification	Reproducibility (SDiR)
Total Solids	Liquid	Total Solids	g/100 g	.05 g/100 g	0.40
Total Fat	Liquid	Total Fat	g/100 g	.05 g/100 g	0.14
Total Fat	Powder	Total Fat	g/100 g	.05 g/100 g	0.80