

# FFA Direct

Quantitative measurement of Acidity in fats & oils

MenidiMedica  
Biotechnology Applications

**REF** 89491 - 100 tests  24 months, storage at 2-8°C

## Description

The acidity level of edible oils and fats is determined by the amount of free fatty acids produced by the breakdown of triglycerides during hydrolytic rancidity. Since this change takes place under unfavourable conditions for the processing and preservation of fats, acidity serves as a fundamental measure of the authenticity of the product. This test is particularly critical in the refining of oils and fats, as it contributes to the evaluation of the processing cycle and the classification of products. Although it has comparable accuracy, this test is simpler to perform than the official AOCS Ca 5a-40 method.

In samples with a pH below 7,0, the free fatty acids present react with a colour-producing compound, resulting in a reduction of the colour intensity. The extent of this reduction in colour is directly proportional to the concentration of acid in the sample, expressed as a percentage of oleic acid.

## Package contents

1 x 0.75 ml R1, 1 x 0.25 ml R2, 5 x 20 ml R3

**Number of tests** 100 tests

**Ref.:** 89491

**Shelf life:** 24 months from date of manufacture

**Storage & Stability:** 2-8°C

## Sample collection instructions

No preparation of olive oil sample preparation is required. For the analysis of samples such as solid fats, butter, margarine, cream, nuts, flours and other extracted fatty foods, it is recommended to follow the guidelines described in the enclosed 'Preparation of test sample for analysis of fatty foods'. This document provides guidance on how to properly prepare these specific samples for analysis and can be obtained from your supplier or from the manufacturer - MenidiMedica Biotech Greece. It will likely include information on techniques such as milling, homogenisation, extraction or other relevant procedures to ensure accurate and representative analysis of the fat content of these foods.

## Preparation of reagents

Preparation WR: Add 150 uL. R1 and 50uL. R2 to one of 5 vials of 20 mL. R3. Screw on the cap of vial R3. The WR changes color to violet and is stable until the expiration date indicated on the outer label of the kit.

## Procedure

Wavelength: 546 nm

Blank: Air

Method: End Point

WR: 1 mL.

Sample: 20 uL.

Mix and incubate for 60" (seconds)

Read results

## Reference values

Linearity (for olive oil): 0,01-1,10 (expressed as % oleic acid)

For other types of food, please inform the producer MenidiMedica Biotech Greece to provide you with the corresponding protocol with the following linearity towards this type of food.

Note: For samples where the analyzer gives you an UPPER LIMIT value, then you should dilute your sample with OLIVE OIL DILUTOR (Ref. 89377, sold separately by MenidiMedica Biotech Greece) in a ratio of 1:1 or 1:5 and multiply the result given by the analyzer by 1 or 5.

## Security measures

The ingredients of FFA-Acidity in fats & oils pose no health risk when used in accordance with standard laboratory practices and the procedures in this insert.

For further safety instructions, refer to the Safety Data Sheet (SDS).

## References

1. European Union (2000). European Parliament and Council Directive 2000/36/EC (23 June 2000) relating to cocoa and chocolate products intended for human consumption. *Official Journal of the European Communities* **43**(L197), 19
2. Sacks FM et al (2017). 'Dietary fats and cardiovascular disease' *Circulation* 2017;135:00-00.
3. Talbot G (2011). 'Sources of saturated and other dietary fats' in *Reducing Saturated Fats in Foods* ed Talbot G. Woodhead Publishing, Cambridge.



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