

OXIDATION STABILITY REACTOR



Accelerated oxidation stability test
for **products containing fats & oils**

WE SUPPORT IN-HOUSE OXIDATION TEST FOR
OUR CUSTOMERS TO HELP THEM FORMULATE
BETTER PRODUCTS



Matrix Life Science

Innovate | Science | Life

Applications

Nutraceuticals & Pharmaceuticals



Food Industry



Animal Feed & Pet Food



Cosmetics



The Dilemma of Manufacturers using lipids

Every product containing lipids undergoes oxidation of the contained fat portion. There can be various stages at processing, packaging, transportation or storage during which a food, feed or cosmetic product may be affected. Air ingress and microbial contamination are the biggest threat to fresh / frozen foods, feeds and cosmetics. This has potential to cause spoilage by foul odour, unpleasant flavor and the loss of its natural sensorial qualities of look and taste. This makes the product unfit for safe consumption thus limiting its shelf life. This further leads to wastage in sales outlets, homes and various consumption points. The immediate solution to same is the use of antioxidants. However, the quality, quantity vs. the product characteristics are important markers for the antioxidant to perform its role effectively. An educated timeline study of the freshness of the product is always important for the manufacturer, seller - retailer and the customer. A known freshness time, helps establish claim, apart from giving market essential information of use-by date and assurance on quality to the consumer.

Solutions Offered By Matrix Life Sciences

Oxitest is a study that can be performed on products from food, feed, nutraceutical, cosmetic and other sectors. We at Matrix support our customers with Oxitest to help them gain details on oxidative stability of their product.

The oxitest is performed on the sample in same form - solid, liquid or semisolid; Fat separation is not required, thus allowing the test of finished product also with ease.



The Oxitest Process

Oxitest Stability Reactor carries out accelerated Oxidation Process and gives you the results in minimum time. The Oxitest equipment allows you to control the pressure and temperature inside the chamber by means of software and gives you result based on Induction Period. The Induction Period is the time required to reach the start point of oxidation in a product. It measures the absolute pressure change as a result of oxygen intake by sample, at constant temperature. Longer the IP, more the stability the product has against oxidation. The stability tests performed with the oxidation reactor accelerate the oxidation process that in normal conditions can last weeks or months and provide fast, accurate and reliable results.



Oxitest Advantages



Accelerate stability tests performed with accurate and reliable results.



Evaluate the effectiveness of antioxidants incorporated in the product



Help estimate accurately the shelf life of the product



Help study the oxidation of product at different storage time intervals



Reduce the long storage time required for stability test

Parameters checked by oxitest

Estimated shelf life

Predict the expiry date of a product by analyzing product with estimated shelf life test. By testing the oxidation stability of product at different temperatures, shelf life at room temperature can be calculated. Study of oxidation at different storage time intervals is also possible with oxitest.

Freshness test

A fresh product provides the guarantee of quality that consumers can trust. Oxitest help compare the quality and freshness of your products from different lots, for example, the same raw material procured from different sources. This can be done by comparing the freshness of different lots with standard/ reference sample.

Repeatability test

A series of analysis on the same sample under same conditions can be done. This can be valuable for accuracy of the stability data of the product.

Formulae comparison test

Formulations are a very important aspect of creating products such as Food, Feed, cosmetics, beverages, nutraceutical products etc. The right formula in the right concentration of active ingredients can create the best product. The most stable formula of a finished product with highest stability (IP), under the same conditions can be checked by comparing them through an Oxitest.

IP during aging

The Oxitest helps evaluate the changes occurring in the oxidation process during the aging of the product. This allows a prediction of the oxidation stability of the product by measuring IP at defined time intervals.

Packaging comparison test

The Oxitest is particularly useful for testing which packaging maintains the stability and quality of the products.



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