



OXITEST

Oxidation Stability Reactor

Oxidative Stability Studies Directly on the Whole Sample
According to Official Method



OXITEST Oxidation Stability Reactor

The OXITEST is designed for R&D and Quality Control laboratories interested in investigating the behaviour of fat oxidation stability. The OXITEST speeds up the oxidation process because of the two accelerating factors: temperature and pressure. The instrument measures the absolute pressure change of oxygen inside the two titanium heating chambers at constant temperature, thus monitoring the oxygen uptake by reactive components in the sample and automatically generating an IP value for further analysis via software.

REPRESENTATIVE RESULTS

The OXITEST ensures representative results by determining the oxidation stability of the whole sample without extensive sample preparation: be it solid, liquid, or doughy.

PREMIUM RESISTANCE

The oxidation chambers, sample holders and covers are made of titanium, a premium material guaranteeing:

- High resistance and excellent chemical compatibility;
- Cost savings by eliminating required consumables.

EASE OF USE

The OXITEST is entirely controlled via PC by the powerful OXISoft™ Software.

- All information at a glance;
- Multilingual support;
- Preloaded methods for data analysis.

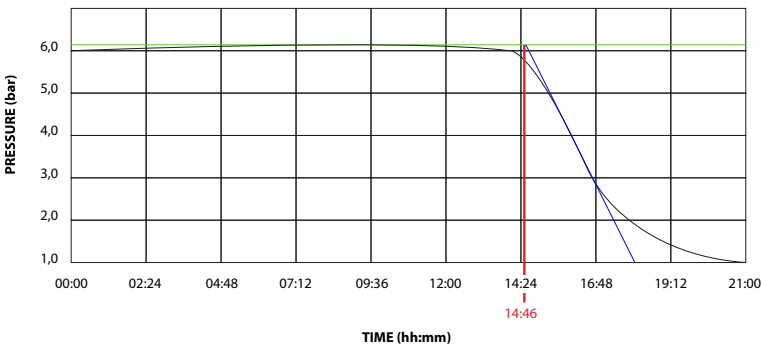
PRODUCTIVITY

The OXITEST has 2 independent chambers and further expansion by connecting up to 4 systems to the same PC allowing the simultaneous analysis of up to 8 samples.



AOCS Standard Procedure Cd 12c-16

Accelerated Oxidation Test for the Determination of the Oxidation Stability of Foods, Oils and Fats using the Oxitest Oxidation Test Reactor



INDUCTION PERIOD - IP

Results

| | |
|-----------------------|-------------------------------|
| Induction Period (IP) | 14h 46 min (Graphical method) |
| Test duration | 21h 00 min |
| Curve 1 | $Y = -0,003X + 6,18$ |
| Curve 2 | $Y = -1,575X + 29,43$ |

The test allows the sample oxidation curve to be obtained, characterized by an **Induction Period (IP)**. The Induction Period is the time required to reach the starting point of oxidation, corresponding to either a level of detectable rancidity or a sudden change in the rate of oxidation. **The longer the Induction Period, the higher the stability against oxidation over time.** The operator can create **test reports** for a single test or compare different analyses for a better interpretation of the data.

OXISoft™ Software

The OXISoft™ is available in different languages and comes with a pre-installed library of methods related to a wide range of sample types. The operator can use and modify them, or create personalized methods. In order to obtain a visible oxidation flex, the sample tested should contain 2-4% of unsaturated fatty acids. When product degradation is mainly due to the loss of the aromatic components and the oxidation flex is not visible, information on the product oxidation can be achieved by interpreting the slope of the oxidation curve. Many parameters can be investigated, including:



1 REPEATABILITY TEST

A series of tests run on the same sample or standard to verify its IP, to calculate accuracy and repeatability of the data.

2 FRESHNESS TEST

To verify the quality of different lots, for example of the same raw material, by comparing them. This can be valuable to confirm, for example, whether the product freshness is related to the cost of raw materials.

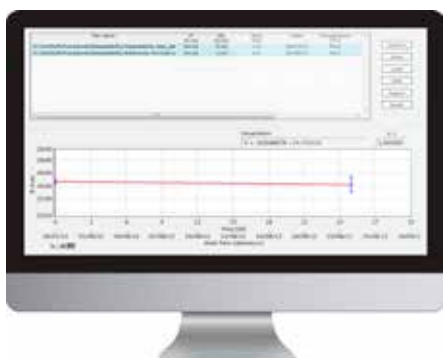


3 FORMULAS COMPARISON

Which ingredients are required to create the most stable formula of a finished product, under the same conditions. By comparing the results, OXISoft™ will be able to automatically distinguish the best formula, easily recognizable by the higher IP, for R&D applications on food products.

4 PACKAGING COMPARISON

Particularly useful for testing which packaging maintains the product in the freshest condition.



5 IP DURING AGEING

This procedure allows to obtain a prediction of the oxidation stability during a shelf life study by measuring the product at defined time intervals.

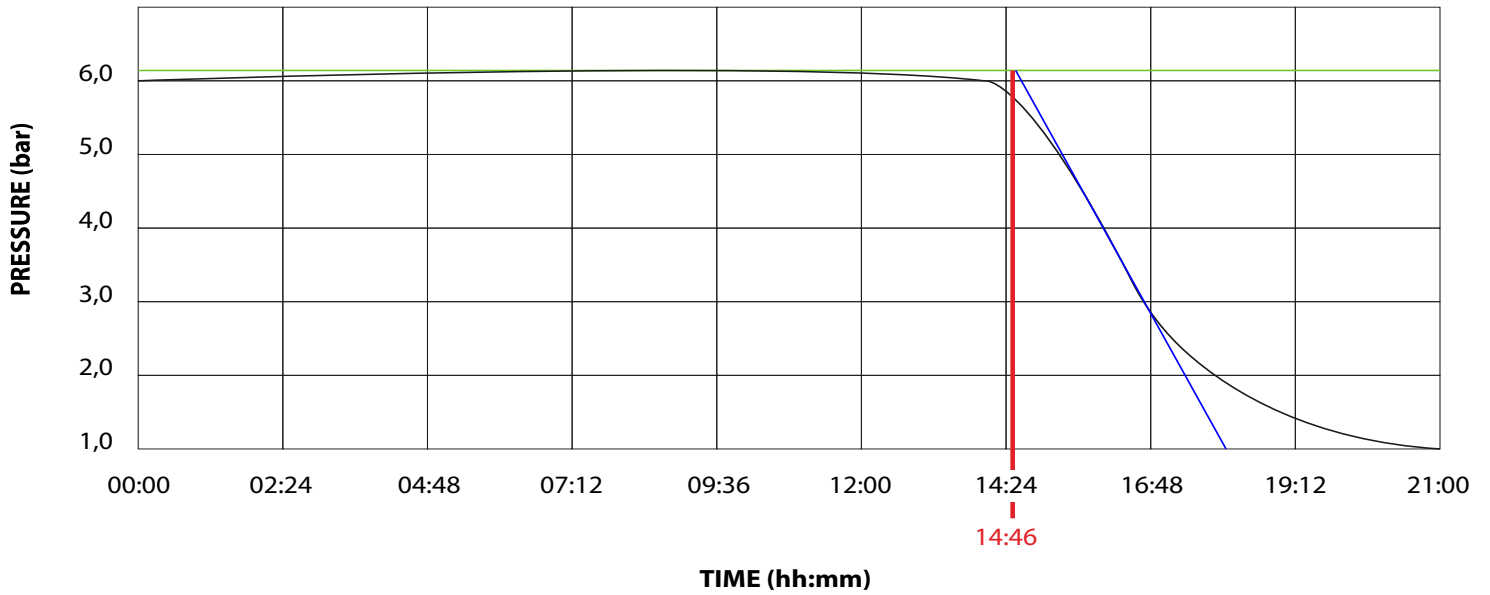
6 ESTIMATED SHELF LIFE TEST

It is possible to have a prediction of oxidation stability for shelf life studies. By following a dedicated procedure and testing the same product at different temperatures, in the case of a linear equation, the operator can extrapolate and estimate the oxidation stability of the sample even at room temperature.

RESISTANT TITANIUM PARTS



OXISoft™ POWERFUL AND INTUITIVE SOFTWARE

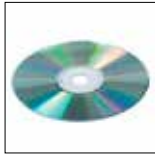


ANALYSIS ON THE WHOLE SAMPLE

INSTRUMENT - CODE

| | | |
|----------------|------------------|------------------|
| OXITEST | 230 V / 50-60 Hz | F30900248 |
| OXITEST | 115 V / 60 Hz | F30910248 |

SUPPLIED WITH



10002948
OXITEST OXISoft™
Software



10003134
USB cable



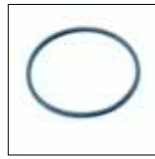
10001985*
Sample holder



10001984*
Spacer



A00000236
High temperature
sealing greaser



10002033
O-ring 3475
viton

* OXITEST is supplied with 6 sample holders and 4 spacers.

OPTIONAL ACCESSORIES

| | |
|---|------------------|
| OXITEST IQ/OQ Manual | A00000242 |
| Calibration temperature kit for Oxitest | A00000360 |
| Calibration temperature kit for Oxitest without thermometer and probe | A00000376 |
| High temperature sealing grease | A00000236 |



FIELDS OF APPLICATION

OXITEST works directly on the whole sample without the need for preliminary fat separation, ensuring representative results on solid, semi-solid and liquid samples, raw and finished products

FOOD, FEED AND BEVERAGE INDUSTRY



COSMETIC INDUSTRY



PHARMACEUTICAL INDUSTRY



TECHNICAL DATA

| | OXTITEST |
|--|------------------------------------|
| NUMBER OF OXIDATION CHAMBERS | 2 |
| CAPACITY OF SINGLE CHAMBER | up to 100 ml |
| MAX DEVIATION FROM THE SET TEMPERATURE | ≤ 0,5 °C |
| REPRODUCIBILITY OF SET TEMPERATURE | ≤ ± 0,2 °C |
| INTERFACE | USB |
| POWER | 900 W |
| POWER SUPPLY | 115 V / 60 Hz - 230 V / 50-60 Hz |
| WEIGHT | 16.5 Kg 36.3 lb |
| DIMENSION (WxHxD) | 365x190x485 mm 14.6x7.6x19.4 in |
| OVERPRESSURE | safety valve |
| OUT-RANGE TEMPERATURE | visual alarm |
| DAMAGED PROBE | visual alarm |
| TEMPERATURE RANGE | from room temp. to 120 °C |
| PRESSURE RANGE | 0 - 8 bar |

Giangarlo Scientific Co., Inc.
1550 Obey Street, Pittsburgh, PA 15205
Office: 412-922-8850 Fax: 412-922-9047
Sales, On-site Service, Repairs and Reagents.

For more information and pricing contact:
800-229-8850 or sales@giangarloscientific.com
Visit us at: www.giangarloscientific.com



SERVICE & SUPPORT

VELP Scientifica products are designed by our engineers to resist years of laboratory use.

Our products are manufactured with premium materials to guarantee the best performance with maximum safety.

According to our experience, a proper and regular maintenance is necessary to ensure the highest performance of analytical instrument. VELP Service Department and VELP Official Partners are always ready to offer you maintenance and service support tailored to your needs.

GET THE SUPPORT YOU NEED CHOOSING THE OPTIONS:

- Installation
- Preventive Maintenance
- Help-desk and Remote support
- Technical Assistance
- Analytical Support
- Calibration Certification



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DESIGNED AND MANUFACTURED IN ITALY



ITALY - HQ
Via Stazione 16
20865 Usmate (MB) Italy
Tel. +39 039 628811
velpitalia@velp.com

INDIA
velpindia@velp.com

USA
155 Keyland Court, Bohemia
NY 11716 - U.S.
Tel. +1 631 573 6002
velpusa@velp.com

CHINA
Xinlong Rd Building 28, Lane 1333
Shanghai city - China
Tel. +86 18616509163
velpchina@velp.com