

## **Oxidation Studies have widespread use**



Products containing vegetable or animal fat derived fats in foodstuffs, pharmaceutical ointment preparations, personal care product formulations to Biofuels are subject to oxidation.

In foods, oxidation can cause rancidity which adversely affects taste and in worst case scenarios results in the formation of Aldehydes or Ketones and can be toxic if consumed. With consumers demanding a shift toward more natural ingredients, companies involved in food processing are searching for antioxidants to help prolong their products life while maintaining the highest quality. Oxidation of topical pharmaceutical preparations can reduce their efficacy while in personal care products results in unacceptable odors. In Biofuels, oxidation can lead to corrosion of the fuel system and result in deposit formations causing clogging of the filter and even cause catastrophic system failure.

A wide range of research initiatives continue in reducing oxidation of materials to find economical solutions including effective anti-oxidants, designing vacuum atmosphere and impervious packaging materials as well modifying processes during manufacture to mitigate oxygen exposure.

An innovative analytical instrument from VELP Scientifica, the OXITEST is now available and helping researchers and quality control departments by providing accurate and timely Oxidation stability tests applicable on a broad wide range of materials. The PC driven OXITEST is based on ASTM D942 and IP42 test methods accepts up to 2 samples of the same or different types and works by subjecting each compartment to oxygen under pressure of 6 bars and 90 °C according to routine applications. The instrument automatically measures oxygen uptake of reactive sample compounds by monitoring pressure changes inside of the 2 inert titanium chambers and generates an IP value or Induction Period.

## OXITEST- for accelerated oxidation stability testing





PC control for representative results OXITEST is controlled via PC; tests are performed **directly on the whole sample** without the need for preliminary fat separation.

With the OXITEST, users can rapidly compare different product formulations, verify different lots of the same raw material, evaluate the performance of different packaging materials and determine the effectiveness of the antioxidants being used. Understanding this information can provide companies involved in manufacturing, a reduction in off specification batches of their finished goods and ultimately saving in lost revenues resulting from products not being able to be sold and consumers being dissatisfied with a particular product and refusing to buy it again.



To learn more about the Oxitest Oxidation Test Reactor, contact sales at 1.800.661.6700 or <u>sales@ats-scientific.com</u> Visit www.ats-scientific.com