

LITMUS FQI BULK PUMP AND STRAW SENSOR

This sensor is designed primarily for regulators, brokers, third party laboratories and anyone receiving large quantities of seafood in bulk quantities. Because decomposition occurs in a non-homogeneous manner, a number of small samples should be taken from random sectors of the container and combined as one. This provides more accurate information pertaining to the decomposition of the whole shipment. The sample is homogenized and a measured amount added to a test tube with appropriate chemicals. A small sample pump pushes a measured amount of air through the sample, releasing the volatile amine compounds and forces the gases through the LITMUS FQI bulk sensor. The amine compounds change the color of the sensor (straw) from yellow to blue and the length of color change is a direct measure of the quality of the product.

A Bulk FQI test kit is offered, which contains everything needed to run this test including a handy calibration chart to read the result. The results are quantitative and can be viewed quickly; once the sample is prepared it takes three minutes to complete the testing. The test is inexpensive, quick, easy to use and can be setup to run multiple tests in a rapid succession. The bottom line benefits from using this test for incoming quality control are; assured higher quality, reduced liability and less shrinkage.



LITMUS FQI BULK PUMP TESTER



LITMUS FQI BULK SENSORS

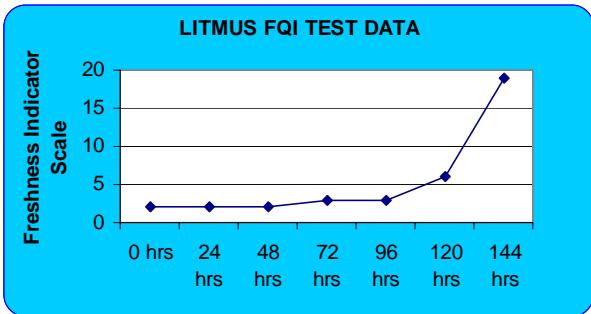
Seafood is one of the most difficult foods to keep fresh. From the day they are harvested until they appear on the kitchen table, keeping seafood fresh is a challenge. Frozen or packaged fish present an even tougher challenge. Being able to tell when seafood is of high quality is vitally important for – bulk producers and processors, wholesalers, brokers, exporters, importers, shippers, at home, in restaurants and in supermarkets.

HOW LITMUS FQI WORKS

When food spoils, there is an undesirable change in color, flavor, odor and/or texture in the product. Microbes, primarily bacteria, cause food decomposition. The type of bacteria, environment and food product will dictate the odor or class of organic compound formed during the decomposition. LITMUS FQI's technology is based on a substrate and an indicator compound provided on the substrate. The indicator compound is colorimetrically responsive to volatile gases (TVB) generated by food decomposition. LITMUS FQI's color changing sensors provide an indication of the quality of a food product inside a sealed container. When the sensor turns blue, the decomposition gases have exceeded guidelines for fitness for human consumption.

LITMUS BULK PUMP AND STRAW SENSOR VALIDATED

Tests demonstrate that fresh shrimp kept on ice shows very little decomposition for the first four days. Between day four and five, the bacterial levels sky rocket and the shrimp goes from high quality on day one through four to bad by day five. This is very typical of shrimp decomposition. The National Marine Institute in Newfoundland, Canada, evaluated LITMUS FQI against all the current competitive technologies and concluded that the LITMUS FQI sensors were the most robust and accurate method for defining seafood quality.



LITMUS FQI's Bulk test has been evaluated by the following laboratories: NOAA/National Marine Fisheries laboratories in Bell, CA, Gloucester MA, and Pascagoula, MS as well as the Marine Institute of the University of Newfoundland for the Canadian Centre for Fisheries Innovation.

Note: Data collected by NOAA/ National Marine Fisheries Shrimp Decomposition Data using the LITMUS FQI sensor .

LITMUS FQI TECHNOLOGY

LITMUS FQI's technology was developed after years of research by leading, world class scientists at the U.S. Food and Drug Administration's National Center for Toxicological Research. These research scientists were presented with two awards from the FDA for the breakthrough. First was the 1999 Award for Excellence in Technology Transfer, followed by FDA's Award of Merit – the highest honor bestowed by the federal agency. The FDA commended the scientists for "significant and exceptional performance benefiting the public by designing and building a product that is a simple, quick and inexpensive method for determining the decomposition of food products".

LITMUS FQI SENSORS ARE NOW AVAILABLE

Commercial validation and distribution is **Now Available** for LITMUS FQI seafood sensors. Companies interested in learning more about how this system can efficiently and cost-effectively warn of seafood spoilage are encouraged to contact LITMUS FQI. Inquiries on additional sensors, available beginning in the First Quarter 2008, including beef, poultry, pork, produce and cooked foods are encouraged. LITMUS FQI also welcomes the opportunity to develop sensors for applications beyond the food sector.

For more information about LITMUS FQI:

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For information other food safety products from LITMUS, visit www.litmusrapid-b.com

