



# Shelf Life Studies

## Overview

Shelf life studies are used by the food and consumer products industry to determine and validate the length of time a product will retain its quality under a certain set of storage and packaging conditions. The shelf life of a product is used to ensure the safety and quality of products prior to consumer release. During the shelf life of a food, it should retain anticipated quality traits that are characteristic to the product, meet any nutritional claims that are indicated on the label and be safe to use.

## Considering a shelf life study?

What characteristic or group of characteristics will determine the end of my products shelf life? This can include concerns about microbiological safety, vitamin fortification levels, color, flavor, odor and texture.

## How to monitor characteristics?

This depends on specific characteristics of your product. For example, if your product is shelf stable and you are concerned about monitoring for oxidative rancidity, vitamin degradation or other chemical properties, it may be possible to use modeling data to do an accelerated study, in a fraction of the 'real time' shelf life of your product.

If you are concerned about 'off' flavors or odors, resulting from oxidative and/or hydrolytic rancidity, you will want to incorporate some sensory evaluations as well. However, the subjectivity of sensory data can be a problem. Using chemical test such as Thiobarbituric Acid (TBA) rancidity, Peroxide Value (PV) and/or Free Fatty Acids (FFA) testing can be very useful indicator tests. Our technical staff will be glad to discuss the relevant applications of these approaches to your particular product.

## Shelf Life Study Testing Services Include:

- Microbiological Evaluation
- Physical Evaluation
- Packaging Evaluation
- Real-Time and Accelerated Studies
- Chemical / Nutritional Evaluation
- Custom Shelf Life Study Design

A shelf life study should be conducted on all new products. Additionally, shelf life studies should be done when there are any changes to a product formulation, processing operation, packaging or storage conditions.

***Real-time and accelerated shelf life studies available!***