Shelf life studies help verify whether prepackaged food will remain wholesome, palatable and nutritional until the end of a pre-determined durable life. After this point, the food develops changes in taste, aroma, texture or appearance that are deemed unacceptable or undesirable. Shelf life testing can also determine how long a food can preserve its microbial, chemical and physical integrity, and indicates whether the food is safe for consumption until the end of its shelf life.

Bureau Veritas' food laboratory performs real-time shelf life testing for clients across North America using the three methods below. A real-time study examines food at regular intervals while it is stored under normal conditions during a period that is greater than its shelf life. Food can be stored either under typical retail temperature conditions or under warmer conditions to inhibit bacteria growth.

**Sensory / organoleptic visual evaluation** assesses a food's odour and appearance relative to a reference sample, as well as the integrity of its packaging. It is used to monitor and record obvious changes that occur over time.

**Microbiological testing** is used to evaluate both food quality and safety. It identifies changes in the number and type of spoilage organisms that can occur over time and any foodborne pathogens. Microbial testing can be run concurrently with sensory evaluation to correlate the deterioration of product quality and safety with microbial growth.

**Chemical tests** can detect changes in quality throughout the product's shelf life. These changes are detected by evaluating characteristics such as peroxide value and the formation of free fatty acids or thiobarbituric acid.

**Not sure which test is right for you?**

Our technical experts would be happy to connect you with the shelf life test that's right for your food product.

**Related Documents**

- [British Columbia - Shelf Life - Chain of Custody](#)
- [Ontario - Shelf Life - Chain of Custody](#)
- [Quebec - Shelf Life - Chain of Custody](#)
- [Shelf Life Testing](#)
- [Accreditation](#)
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