



SHELF-LIFE TESTING AT ACCUSCIENCE LABS

..... There are many definitions of shelf-life provided by governments and organizations. The Institute of Food Science and Technology defines shelf life as "the period of time during which the food product will remain safe; be certain to retain its desired sensory, chemical, physical, microbiological, and functional characteristics; where appropriate, comply with any label declaration of nutrition data, when stored under the recommended conditions."

Both food safety and quality are important aspects of acceptable shelf life. Although pathogens are usually monitored during shelf-life studies, a suitable food safety program is the best way to ensure the product's safety.

Why is Stability (Shelf-life) Testing Important?

Shelf-life testing is the determination of how a product functions as a result of age and environmental conditions such as temperature, humidity, etc. Degradation, efficacy transformation, and ultimately suitability of use are the primary goals in food and product safety and storage. Using accelerated stability studies, we can collect data under controlled conditions over a short period of time that will help to reveal the shelf-life of a product and the changes (chemical and physical) over this period. This information will provide product expiration dates, as well as guide the potential changes in packaging, choices of product ingredients and additives, or even direct evolution in the manufacturing process itself. Other shelf-life studies such as secondary shelf-life studies can be performed to affirm the suitability of the product outside the manufactured packaging.

Instrumentation and Techniques

Real-time studies are run at 25°C/60% relative humidity (RH) and accelerated studies are run at 40°C/75% RH. Depending on the active ingredient various instrumentation could be used, however microbial by PCR technology is always part of it.

What Sets AccuScience Apart?

Having the right equipment is critical, but it is only part of the equation. The human element remains relevant and important in the knowledge of common chemistries and physical properties associated with the determination of shelf-life studies. The AccuScience management team has more than 100 years of collective analytical testing experience, and we work in a testing facility set to the standards of ISO17025 for pharmaceutical and environmental laboratories. By strictly following these guidelines, we deliver the most accurate and legally defensible results in the industry.

Sample requirement: Varies based on the type of product; In general, one or two final package for each interval

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