

Formula Foods

SHELF LIFE TESTING AND VERIFICATION

The Shelf Life of a food product is a key parameter that impacts on processing, distribution, stock management practices and economics. In most cases it is a legal labelling requirement to state the "Use By" or "Best Before" date on the product. Formula Foods has been performing comprehensive shelf life trials and shelf life validation work on food products for over 10 years. A shelf life analysis gives a clear picture of the food product's expected shelf life.



Procedures used are dependent on the product and may include -

- Temperature and Humidity controlled systems using 'Fourier' monitoring.
- Microbiological testing – AOAC methods yeast & moulds, total aerobic counts and other micro testing as required.
- Water activity tracking during the period of the trial using 'Decagon's 4TE' water activity instrument.
- Isotherm analysis using Decagon's Vapour Sorption Analyser
- pH testing / tracking
- Viscosity testing to track changes
- Texture analysis using Perten TexVol instrument
- Microscopic photography to show physical changes
- Organoleptic / sensory analysis for taste/flavour, texture and visual changes during the period of the trial. The use of trained and untrained personnel gives a balanced view.
- Gas analysis O₂ / CO₂ of MAP [modified atmosphere packaging] using 'Dansensor' gas analysers.
- Leak detection of MAP gas flushed products
- Photographic tracking or Colorimetric analysis using 'MicroOptix iLab' spectrometer to track colour change on ageing.
- Fat oxidation / rancidity analysis – peroxide / p-anisidine / FFA.
- Vitamin degradation if required [non accelerated]
- A detailed report is supplied in bound presentation format



Accelerating the Process ~ Accelerated shelf life trials [ASLT]

During the development of a new product or assessment of a reformulated product it is often necessary to determine a product's shelf life. In ASLT the rate of change in the product is accelerated by adjusting some of the controlling variables.

Over many years Formula Foods has run side by side experiments with 'real time' versus 'accelerated' trials to develop the capacity and capability to perform effective ASLT for many food types, helping to reduce the product's time to market.

We have experience with a wide range of products and product types. To find out if ASLT is appropriate for your product, please contact us to discuss your needs.

In addition to performing shelf life analysis our team of food science / technologist consultants can assist with formula modification or packaging recommendations to improve the product's shelf life if necessary.

Let our professional skills and experience remove the guess work from your product's shelf life – call us for a shelf life analysis quotation.

Extending the shelf life of your food product can add substantially to the bottom line!



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