

Shelf Life



Biovet[®]
www.biovet.ca

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Shelf Life

The role of Shelf Life is to determine how long a food can maintain its organoleptic qualities, preserve its microbial integrity and respect its nutritional value.

At Biovet, we have decided to offer you the study in real time only. Food is stored at 4°C or room temperature for a predetermined period longer than the estimated Shelf Life. Tests are checked at regular intervals.



When is the shelf life established?

When creating a new product, when validating the expiration date or after a change in manufacturing process, ingredients, supplier or packaging.

Procedure

How is a product's shelf life estimated?

- Knowledge of the product, ingredients
- Test history or advance testing
- Competitors' practices

How can you identify the tests needed to determine shelf life?

Depending on ingredients, pH, water activity and the MAPAQ guide: Guidelines and standards for interpreting analytical results in food microbiology, we can help you select the best tests for your shelf life.

<https://www.mapaq.gouv.qc.ca/fr/Publications/recueil.pdf>

To detect pathogens (*Listeria monocytogenes*, *Salmonella* spp., *E.coli* O157:H7 or *Campylobacter* spp.), depending on the ingredients, it is recommended to test them at least on Day 1 and when the shelf life expires.

Other tests (*E. coli*, colony count, *Staphylococcus aureus*, yeasts and moulds, etc.) are based on process hygiene criteria.

How do you identify the test frequency?

The test frequency depends on your estimated shelf life.

The shorter the shelf life (7 to 10 days) the closer the test frequency should be (e.g. Day 1, 5, 6, 7, 8, 9, 10). For products with a longer shelf life, test intervals may be spread out (e.g. Day 1, 10, 20, 30, 35).

We can help you identify the days for testing your shelf life, if necessary.

Note that it is important and essential to always test samples on Day 1 and to exceed the target date by 25%.



How to identify the number of samples needed

The MAPAQ guide recommends quintuplicate testing. However, for budget reasons it is possible to test in triplicate. This means that every test day, we will test three or five products (depending on whether you have chosen triplicate or quintuplicate).

e.g.: shelf life tested in quintuplicate on Days 1, 5, 6, 7, 8, 9, 10.

For this shelf life, we would need a minimum of 35 products, i.e. 7 x 5 - 35 (days of testing x quintuplicata), regardless of the tests requested.

Note that the higher the number of samples analyzed per day, the higher the confidence level of your study will also be.

Storage condition

We offer the possibility of storing your samples at 4°C or at room temperature.

If you want a break in the cold chain, it is important to keep us informed and mention it on your request. The cold chain can be broken to simulate what can happen during transport, at the retailer or at the user.

Sending samples

Samples used to test shelf life must be from the same production batch and packaged in their final packaging.

Samples must be received in the laboratory on Day 0 (or Day 1), in coolers if the shelf life is at 4°C or in a box if at room temperature.

An analysis request form should be filled in with all relevant information about your product's shelf life.

www.biovet-inc.com/en/agri-food

In addition, if you are a new customer, it is important to contact our Accounting Department to open an account.

Transmitting results

You will receive your reports during testing. The turnaround time depends on the tests requested.

It is strongly recommended to track your product's organoleptic properties during its shelf life, i.e. on every day of laboratory tests, open one of your products to study its odour, colour and feel. You know your product better than anyone else so if you detect an organoleptic change and want to stop testing, please let us know as soon as possible.

Options

Additional charges may be required if you want:

- A break in the cold chain
- Forwarding of the test report
- Consultation with a microbiologist to help you interpret your results



To reach us

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