

Information about shelf life and storage of KLIBA NAFAG diets

KLIBA NAFAG guarantees optimal diet quality until delivery and with this information sheet we would like to support our clients to keep high quality while storing the feed in-house.

Shelf life of KLIBA NAFAG diets:

- pelleted feed, non-irradiated: 9 months
- pelleted feed, irradiated: 12 months
- extrudate, non-irradiated: 12 months
- extrudate, irradiated: 12 months

The shelf life of 9 months for pelleted feed is based on the risk of microbiological spoilage in combination with nutrient degradation. For the extrudate and irradiated pellets we can guarantee a longer shelf life referring to the microbiological spoilage. However, the degradation of nutrients as well as variable storage at the customer limits shelf life to a maximum of 12 months for all types of feed for reliable research.

Storage of diets at KLIBA NAFAG (from production to delivery):

- Feed is stored in a dark, air-conditioned and climate-controlled special warehouse.
- Temperature 9-16°C
- Humidity: 45-75%

Storage at the customer:

- It is recommended to store the diets under constant cool, dark and dry conditions and with pest control in the room.
- The above mentioned conditions (temperature 9-16°C, humidity: 45-75%) are considered to be optimal for the feed.
- When storage in an air-conditioned and monitored special room is not possible, it is recommended to keep the room as cool and dry as possible and not to exceed room temperature. Increasing temperature and humidity accelerate the processes in the feed and increase the risk for spoilage (see below).

The main **risks** for stored feed are degradation of nutrients, microbiologic spoilage and contamination by rodents, birds, insects and other pests (vermin). All these risks can be managed for a given time period by appropriate practice (see above).

Microbiological spoilage

There are two major physical factors affecting quality of feed during storage: temperature and humidity. Microbiological spoilage occurs when the moisture content of the feed is too high. To eliminate this factor moisture content of every produced batch of diet at KLIBA NAFAG is measured and the batch will only be released if the humidity is < 13% in the feed.

Molds will usually start to grow first in an insufficiently dried feed generating more moisture that allows bacteria to develop and the vicious circle of spoilage is started.

Your experienced Swiss partner for all laboratory animal diets

Degradation of nutrients

In the laboratory animal research business one of the most important quality criteria is standardization. Therefore, factors that can influence an experimental outcome should be minimized. The degradation of nutrients in the feed (particularly fats and vitamins) is starting at the day of production and can cause variation in the nutrient levels over a certain time period although nutritional requirements are still met. This has to be taken into account for the definition of the shelf life for the feed.

Pest control

Feed storage areas should be proofed well against rodents, birds, insects and other vermin. Pest harborage areas should be eliminated, for example, by leaving clear boundaries around walls and individual pallets and by using good lighting, especially around the periphery of the storage area.

Kind regards,

KLIBA NAFAG-Team

A handwritten signature in blue ink, appearing to read "Steffen Biehle".

Steffen Biehle
Head of Business Unit LPZ