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# **Opinion**

**from the Committee for Nutrition of Laboratory  
Animals**

**On the use of non-standardized feed  
in laboratory animals**

**July 2012**

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The reactions of the animal in the experiment are determined by a variety of factors:

- ⇒ genetic factors (incl. strain, sex)
- ⇒ environmental factors (incl. microbial status, housing, feeding, social status)

One of the most important tasks of laboratory animal science is to standardize these determining factors to a very large extent so as to minimize possible causes of unwanted trait variance and optimize the reproducibility of results.

For this reason, laboratory animals are routinely fed using “standardized” complete feed.

“Complete feed” means compound feed which, by reason of its composition, is sufficient for a daily ration.

(EN L 229/6 Official Journal of the European Union 1.9.2009).

By contrast, the use of non-standardized supplementary feed, such as grain, seeds, nuts, “snack products”, hay cobs, fruit and vegetables, can bring with it considerable problems in terms of the reproducibility of experimental results.

Non-standardized supplementary feedstuffs

- lead to uncontrolled alteration of nutrient intake and thus affect the metabolism,
- result in the uptake of unwanted accompanying substances, leading in turn to unknown interactions in the experiment and erroneous interpretation of the results,
- can have a negative impact on the microbiological status of the animals and introduce pathogens into the stock that are harmful to the animals. Food that is retailed for human consumption can also carry microorganisms that are pathogenic or potentially pathogenic for laboratory animals.

The use of non-standardized feed is therefore not to be recommended!

Feeding with non-standardized feed may be necessary or desirable in various species (e.g. primates) and under certain circumstances (e.g. positive reinforcement in conditioning studies).

If non-standardized feed is used, it is necessary that

- its use is agreed with all those involved in the study,
- its nutrient content is analytically determined,
- the nutrient content is factored into the calculation of the rations,
- the legally stipulated threshold limits for unwanted accompanying substances are not exceeded,
- the microbiological status meets the requirements of the housing conditions,
- if possible, provide quality certificates, as is usual e.g. in the case of complete feed,
- any supplementary feeding given is duly documented and mentioned in publications.

The species-specific feeding recommendations published by the Committee for Nutrition of laboratory animals deal with the nutritional peculiarities of the various species in detail.

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