

Topic: Article for Pet Food Industry – Issue September 2010

Classical Palatability issue will focus on “**Measuring Palatability**”.

Hereunder please find Panelis contribution.

Deadline : 21 July 2010



Avoiding bias in palatability testing.

For palatability testing panels, the control and stability of environmental parameters, and the accuracy of protocols are key elements to achieving consistent palatability results. But even with the best management of these elements, some biases can occur when working with animal panels, even in expert panel facilities. These biases can significantly distort the interpretation of test results. “One of the responsibilities of our measurement experts and animal behaviorists is to continuously improve the protocols, in order to eliminate bias as much as possible” says Christelle Tobie, Panelis Communication Manager.

How do you explain that the same test repeated on two different panels can sometimes deliver different results? In 2004, Panelis pointed out that strong food habits play an important role in the animals’ choice (Larose, PFI Sept 2004). Ensuring a diversity of foods was proposed as a relevant solution. The dietary past and the development of food habits in animals can often explain the discrepancies between panels. Moreover, the methodologies are not always exactly the same, and it contributes to the panel effect. To avoid these effects, it is necessary to standardize testing panels, therefore Panelis diversifies kibbles and products fed to the animals as much as possible. Standardization also means a randomized choice of several panels are selected for each test. To further eliminate bias, Panelis implements palatability evaluation with subgroups of animals from different testing centers. The panel is then made up of animals not necessarily having the same feeding past or food habits. This virtual panel can be set up at a subgroup level or at an individual level. This solution also has the advantage of not physically moving animals, which could create additional disturbances.



Still other types of biases can arise. For example, to help avoid position eater tendencies, Panelis has implemented an Index of lateralization to control this bias in versus tests. The Index of lateralization is calculated every 3 months. It considers the frequency of meals during which significantly higher intake is observed on one side. This methodology aims at removing animals that are considered strongly critical i.e. animals having an Index over 70% on two consecutive quarters. This protocol identifies the “true position eaters”, meaning the one exerting a preference for one side regardless of the product or conditions.

The link between bias controls and reliability of results is acknowledged and addressed. Moreover having the possibility to control bias allows the introduction of new measurement tools or combination of different methods to ensure consistency of test results. Christelle Tobie concludes, “The development of expertise in the field of palatability measurement is inherent to the continuous improvement of methodologies. That’s the everyday purpose at Panelis.”