

3rd International

Veterinary Congress

August 18-20, 2016 London, UK

Determination of acrylamide using immuno-enzymatic method in commercial dog and cat food

Bilal Cem Liman and Nimet Kilic
University of Erciyes, Turkey

Nowadays the pets which are grown in human auspices have no chance to choose their food and mistakes that people make about food of their cats and dogs will adversely affect the health of animals in a negative way. During the production of cat and dog food, high temperature applications at different stages are available. As a result of the starch containing structure of the cat and dog food, it is foreseen that acrylamides may be present in the food because of Maillard reaction. The aim of this study is to detect acrylamides in dry cat and dog food which are currently available in the market with a new method which is immunoenzymatic method. In this way potential health risks for cats and dogs will be detected, for the first time using this method acrylamides levels will be detected and applicability of this method is going to be tested. For this purpose, from a variety of firms in the market 42 cats and dogs food were randomly collected and passed through several stages for testing. Residual acrylamide in food was tested using immunoenzymatic method and as a result analyzed dry cat and dog food samples, 33% (14 samples) presence of acrylamide have been found, in these samples average acrylamide density is 87 ppb. According to the findings the highest acrylamide density is 155 ppb and the lowest is 45 ppb, in 67% of total samples acrylamide was not detected. The values set out in findings are way below from European Commission (EC), the European Food Safety Authority (EFSA) assessment of human food indicator value. Consequently, immunoenzymatic method can be used as a standard technique on cat and dog food but it must be supported by a wider range of research. Again it can be advised that while preparing food for pets without the chance of food selection formulation changes, process parameter changes and specially extrusion and other heat related stages can be done more carefully to limit Maillard reaction which causes acrylamide in food.

Biography

Bilal Cem Liman has completed his undergraduate study in the Faculty of Veterinary Medicine of Ankara University in 1985 and joined PhD degree in the Department of Pharmacology-Toxicology, Faculty of Veterinary Medicine of Atatürk University in the same year and was assigned as a Research Fellow in 1986. He has completed his PhD degree in 1991. He was assigned as an Associate Professor in 1996 and as a full Professor in 2002. He has memberships in the following professional societies: Society for Veterinary Pharmacology-Toxicology (Turkey), Society for Toxicology (Turkey), EUROTOX and IUTOX. Within the framework of Socrates-Erasmus Academic Staff Mobility Program, he delivered undergraduate and postgraduate lectures in the Faculty of Veterinary Medicine of University of Udine in 2011. He has also served as Deputy Dean, Vice Dean and Head of the Department Pre-Clinical Science. He is currently working as a Faculty Member and Head of Department of the Pharmacology-Toxicology in University of Erciyes, Turkey.

limanb@erciyes.edu.tr

Notes: