RICERCHE EFFETTUATE

IGIENE DEGLI ALIMENI AD USO ZOOTECNICO

Merenda M, Ardigò P, Pongolini°S, Foni°E, Fiorent ini°L, Frasnelli°M, Leonelli°R, Lazzaretti G, Giacometti B, Savorelli E, Ceci I, Bonicelli F, Zarenghi L

Capacità di risanamento nei confronti di Salmonella spp. da parte dei trattamenti utilizzati durante il processo di produzione dei mangimi : risultati preliminari

Convegno Microbiologia Predittiva: possibili utilizzi nell'attività di controllo ufficiale degli operatori del settore alimentare / [s.l. : s.n., 2012]. - 20 p http://www.ausl.re.it/Home/DocumentViewer.aspx?ID=1778&TIPODOC=COMUNICAZIONE [Nr. Estr. 5226]

Convegno Microbiologia Predittiva: possibili utilizzi nell'attività di controllo ufficiale degli operatori del settore alimentare : Reggio Emilia : 30 Novembre 2012)

Rosar G, Gon F, Puppini B, Baudino R, Rizzi N, Tosi°G, Diana F

A new fast ELISA test kit for the quantitative detection of T-2 and HT-2 toxins : from R&D development to interlaboratory trial

7th Conference of the World Mycotoxin Forum® and XIIIth IUPAC International Symposium on Mycotoxins and Phycotoxin : 5-9 November 2012 Rotterdam, The Netherlands : abstracts of lectures and posters / [s.l. : s.n., 2012]. - p 188 [Nr. Estr. 5258]

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T-2 toxin and HT-2 toxin are trichothecenes type A mycotoxins produced by fungi of the Fusarium genus, which are commonly found in various cereal crops and processed grains. These toxins have been shown to cause a variety of toxic effects in both animals and humans, including protein synthesis inhibition, immunity system alterations and haematopoiesis inhibition. The EU recommended limits for the sum of toxins are under discussion after EFSA's (European Food Safety Authority) recent evaluations. To monitor the contamination levels of these toxins in cereals and feed, it is mandatory to have a rapid, easy-to-use, robust and reliable screening tool with sufficient cross-reactivity for the HT¬2 metabolite. The present work shows the performances of Celer T2, a new quick ELISA test kit for the quantitative determination of T-2 and HT-2 toxins in cereals and feed. Thanks to a proper immunogen design, a polyclonal antibody with 100% cross-reactivity for T-2 toxin and 72% for HT-2 was obtained. The measuring range of the assay is 0.025-1.00 ppm and can be extended up to 5 ppm by dilution of sample extracts. The assay was in-house validated for whole wheat, wheat flour, oats, maize and poultry feed. The limit of quantification (LOQ) was set at 0.025 ppm for wheat and maize and 0.050 ppm for oats and feed. The mean recovery for 0.1-1 ppm spiked samples was 125±18% for whole wheat, 116±14% for wheat flour, 114±7% for oats, 100±9% for hulled oats, 109±13% for maize, and 113±20% for poultry feed. The trueness was investigated on reference samples left over the materials of different proficiency schemes and turned always to be satisfactory. The test kit was submitted to an interlaboratory trial. In order to verify the variability of the assay itself, the sample preparation was omitted. Four different laboratories performed an analytical session where three curves were run and the concentrations of two different T-2 solutions (0.04 and 0.20 ppm) were determined. The B/Bo (%) of the calibrations curves and the results of the solutions were analysed by Kruskal-Wallis ANOVA test; the populations of data never turned to be different one to each other. The interlaboratory CV of the results was 17 and 10%, respectively for 0.04 and 0.20 ppm solutions. In conclusion, Celer T2 showed good performances during the whole in-house validation, both on spiked and incurred samples. The robustness of the reagents was confirmed during the inter-laboratory trial, thus demonstrating its suitability to a routine implementation.

Tosi°G

Aflatossine : il loro impatto sull'avicoltura

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