Innovative Veterinary Drug Screening

A new efficient way of minimising risks of overlooking health hazards

Veterinary drugs constitute a complex group covering a couple of hundred substances representing different chemical classes and therapeutic areas. Not all of the veterinary drugs are of equal importance for risk monitoring. In fact, the relevance of certain actives depends on the specific sample, the country of origin and destination and the stage of sampling within the food supply chain.

How to find the right analytical scope for risk monitoring?

With launching an innovative screening technique using High-Resolution LC-MS, Eurofins is offering its customers unique opportunities and improved cost efficiency in the complex field of veterinary drug screening.

Novel technique to cover a broad substance scope

Experts from the Eurofins' Competence Centre for Veterinary Drug Analysis established an LC-HRMS screening method for the simultaneous determination of about 100 veterinary drugs from currently 9 different antibiotic and antiparasitic substance classes:

- amphenicoles
- benzimidazoles
- quinolones
- ß-lactames
- macrolides
- nitroimidazoles
- sulfonamides
- tetracyclines
- triphenylmethane dyes

The method complies with the performance criteria of Implementing Regulation (EU) 2021/808. The screening procedure can be applied to meat, fish, milk, egg and derived products as well as selected special matrices.

Unique benefits at a glance

Compared to conventional screening methods such as inhibitory tests or other biotests, LC-HRMS covers a large set of targeted substances including transformation or metabolic products with high selectivity and sensitivity.

Due to a high level of automation the method is very cost efficient.

In case of positive findings, quantification using methods from our broad confirmatory method portfolio needs to be done and is surcharged. Based on the long-term experience of our experts, positive findings occur only in a small minority of samples.

With its broad substance scope and the additional created spectral libraries, the method minimises efficiently the risk of overlooking health hazards in the area of veterinary drugs.

Eurofins' confirmatory method portfolio

Today more than 250 veterinary drug residues are part of Eurofins' analytical confirmatory method portfolio including risk-orientated multi-class test strategies using LC-MS/MS. A multi-class approach for more than 100 antibiotics and antiparasitics belongs to the standard portfolio as well as a developed multi-class analysis for hormones and endocrine disruptors covering more than 70 substances. Also methods for non-steroidal anti-inflammatory drugs (NSAIDs) and the most important beta-agonists complement Eurofins' comprehensive offering.

Outlook

Future developments will focus on a screening method for hormones and hormone analogues.

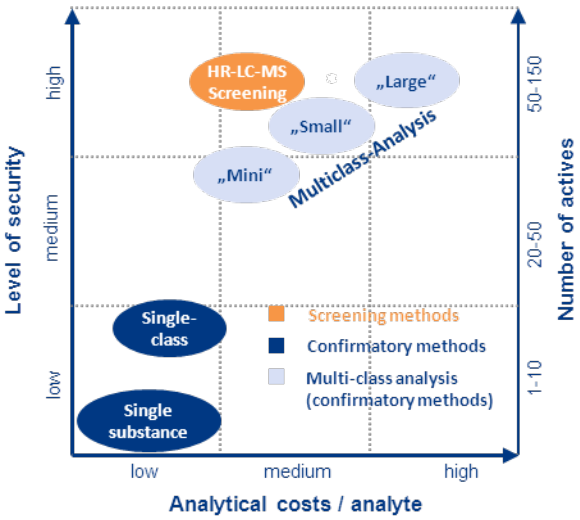
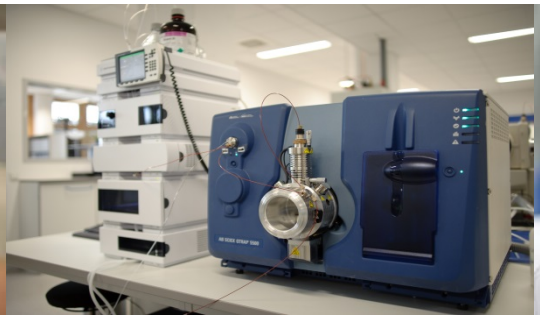


Fig.: Risk-oriented test strategies

24GSR401


Eurofins Food & Feed Testing Germany
service@eurofins.de – www.eurofins.de