Newsletter – Antibiotics residues

Safe and efficient monitoring utilizing LC-MS/MS multi-method

The analysis of residues of antibiotics is a central part of the quality control of honey and bee products. Any residues of an application are subject to zero tolerance in the EU and many countries worldwide. Any positive result is also potentially critical in trade.

Well consulted

In addition to the laboratory services, we regularly evaluate observed residue findings from various countries worldwide and are glad to advise you on efficient and risk-based residue monitoring.

Safe and efficiently analyzed

With our **ULTRA-sensitive LC-MS/MS multi-method**, we can provide you with an extremely powerful tool for your quality control.
The multi-method for honey detects five important groups of antibiotics namely **sulfonamides, tetracyclines, fluoroquinolones, macrolides and nitroimidazoles** using only one sophisticated sample extraction (solid phase extraction - SPE) and measurement.
If you want to carry out a **risk-based, step-by-step batch control** and, for example, only order the sulfonamides in the first step, the results for further groups can be quickly generated in the next desired step by performing a subsequent complex evaluation of the multi-analysis already carried out. Only possible positive results have to be confirmed by an independent repeat analysis as usual. The multi-method therefore offers **you high flexibility and a considerable time advantage**.
Matrix-related **interferences** of the LC-MS/MS are **minimized** by the sample preparation (SPE= solid phase extraction) used and the **sensitivity** of the analysis is **significantly increased**. **False-positive** findings - which are possible up to 5% with ELISA screening - can be **excluded** in the LC-MS/MS. The LC-MS/MS analysis and possible positive results are also secured using isotope-labelled internal standards according to the highest quality standard.
Combined with the prohibited substances chloramphenicol and nitrofurans as well as streptomycin, which have to be tested with separate methods for safe and sensitive analysis, we offer you **attractive antibiotics packages for efficient residue monitoring**.

Well informed - even below the limit of quantitation (LOQ)

Due to the valid **zero tolerance** and available trade specifications, QSI offers the analysis and reporting of the antibiotic groups with different limits of quantitation (LOQ), e.g. the standard method for sulfonamides with 2 µg/kg, 5 µg/kg and 10 µg/kg.
Positive results above the ordered LOQ are reported in tabular form in the **official test report** and judged accordingly.
Positive results below the ordered LOQ are **automatically reported to you in the form of "Additional Information" (pdf)** from the specified threshold value onwards. Also these findings are valid and have also already been confirmed by an independent repeat analysis. The threshold value is **1.0 µg/kg for the standard methods and ½ LOQ for all ULTRA methods and prohibited substances**, e.g. Sulfonamides-ULTRA from 0.25 µg/kg.
We report **one decimal place more than the ordered LOQ**, so that e.g. a positive result of 1.9 µg/kg sulfathiazole would be stated in the official report (LOQ = 2 µg/kg) as "n.n." (= below LOQ) and the positive value is only reported within the "Additional Information", so that you as the customer are always well informed about the residue findings, even below the limit of quantitation.

Please contact us! We will be happy to advise you!

Your QSI team

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