

## A new method detects traces of veterinary drugs in baby food

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The amount of veterinary drugs detected in baby food is very low and not worrying, but it shows a need for control. Credit: SINC

The quantities are very small, but in milk powder and in meat-based baby food, residues of drugs given to livestock were found. Researchers from the University of Almería (Spain) have developed a system to analyse these substances quickly and precisely.

Antibiotics, such as tilmicosine, or antiparasitic drugs, such as levamisole, are given to [livestock](#) in order to avoid illness, but they can remain later in food. Scientists from the University of Almeria (UAL) have confirmed this, whilst checking new methodology to identify the minute quantities of these substances that remain in [baby food](#) preparations.

"The concentrations detected have been generally very low. On one hand, this suggests they are not worrying amounts, on the other hand, it shows the need to control these products to guarantee food safety" Antonia Garrido, Professor of Analytical Chemistry at UAL, pointed out to SINC.

With this objective, the team has developed a 'multi-residue' method, which allows several drugs to be detected at a time in baby food. Chromatographic techniques are used for this, in order to separate compounds, and mass spectrometry to identify them.

The "precise, simple and fast" methodology has been validated by analysing twelve meat products (cow, pig or poultry) and nine milk powder samples. Data indicate that concentrations of veterinary drugs vary from 0.5 to 25.2 µg/kg in the former and 1.2 to 26.2 µg/kg in the latter "although with more samples, more conclusive results would be obtained".

## **Higher concentrations in poultry products**

Sulfonamides, macrolides and other antibiotic traces have been found, as well as anthelmintics (anti-worm) and fungicides. In total, they found five veterinary drugs in [milk powder](#) and ten in meat products, especially if they were chicken or other poultry.

The study that is published in the *Food Chemistry* journal, suggests that this could be because in some farms there is no thorough control on the administration of drugs to animals.

Until now, the European Commission has regulated the levels of pesticides and other substances in cereal based foods for children and babies, but not in animal based foods. As a result of the lack of regulation, a zero tolerance policy is usually applied to veterinary drugs

in food, as they can cause allergic reactions, resistance to antibiotics and other health problems.

**More information:** M.M. Aguilera-Luiz, J.L. Martínez Vidal, R. Romero-González, A. Garrido Frenich. "Multiclass method for fast determination of veterinary drug residues in baby food by ultra-high-performance liquid chromatography–tandem mass spectrometry". *Food Chemistry* 132 (4): 2171-2180, June 2012 (available on line). [DOI: 10.1016/j.foodchem.2011.12.042](https://doi.org/10.1016/j.foodchem.2011.12.042)

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