IMPROVEMENT TO THE EXISTING TETRASENSOR AND EXTENSION OF SCOPE TO FEED, URINE AND THERMALLY PROCESSED MEAT MATRICES

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Tetrasensor is a competitive receptor-based lateral flow dipstick assay developed by Unisensor and detecting many tetracycline compounds at least at MRL values in different matrices such as milk, honey and raw animal tissues. Within WP2b (T2b4 – D2b3) of Conffidence Eu-project, detection of tetracycline family residues with Tetrasensor was improved and extended to 3 additional matrices : urine, feed and heat processed meat.

In order to fit with these matrices, new sample processing was developed and reagents were adapted to improve the test line signal. This dipstick-based assay allows the detection of tetracycline compounds at very low levels of detection (< 50 ppb - µg/kg) in each matrix in less than 20 minutes. For those who need less sensitive results, it is possible to further dilute the sample preparation to proportionally turn up the limit of detection. Accurate performances of this Tetracycline screening assay will soon be confirmed by in-lab validation studies within D.2b.7 by FERA-CSL partner.

In conclusion, we have improved our generic Tetracycline-dipstick assay. This updated format allows detection of the most Tetracyclines in a large range of matrices including raw animal tissues, processed meat, feed, urine, honey, egg, water and seafood.

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