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Main topic : Food Safety

Cannabinoids screen in animal specimens by UPLC-MS/MS: In-house validation and single-laboratory blinded method test (BMT)

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## Introduction

Cannabis sativa, including hemp and cannabis plants, contains more than 113 cannabinoids. Among them, delta-9-tetrahydrocannabinol (9-THC) is the major psycho Hemp contains predominantly the non-psychoactive cannabidiol (CDB) and less than 0.3% of 9-THC (dry weight). Because of the increased human consumption of can uses, pets are more susceptible to the exposure of 9-THC toxicity. In addition, following the 2018 Farm Bill, industrial hemp uses as an agricultural commodity to fee about the pharmacokinetic and tissue residues of cannabinoids following oral administration in bovine. So, whether it is for diagnostic purpose or research, there is a new in animal specimens.

MethodWe decided to develop sensitive analytical methods to screen for cannabinoids in bovine specimens, including plasma, urine, and tissues. Sample clear UPLC-MS/MS are presented. Plasma samples are clean-up by solid-phase extraction on 96-well plate and cannabinoids are analyzed by UPLC-MS/MS. Follow Vet-LIRN (Veterinary Laboratory Investigation and Response Network) to. Blinded samples prepared by Vet-LIRN are analyzed by the method originating (MO) method test (BMT) are then shared with Vet-LIRN for evaluation.

ResultsBMT data on bovine plasma are presented and confirmed that out of 21 cannabinoids, 17 can be quantitated and 4 can be semi-quantitated with a high degree c Conclusion

The method is used to perform a pharmacokinetic study following the oral administration of hemp to cattle.<sup>1</sup> Methods are also developed in others specimen (tissues). T important from a toxicology point of view. It allows to test animals intoxicated with cannabis products and treat them appropriately.<sup>2</sup>