

Brominated flame retardants in our domestic animals

The brominated flame retardants are to be found everywhere in our surroundings, despite being phased out since years back. These compounds are highly persistent and have potential health effects, such as disrupting hormone levels and neurodevelopment. Within the project MiSSE (Mixture aSSessment of Endocrine disruptors) we have seen that domestic cats have elevated levels of the polybrominated diphenyl ether from high dust ingestion due to their grooming behavior. In addition, we found the fully brominated biphenyl BB-209 in all cat serum analyzed. This is surprising as BB-209 has been phased out since decades and we can also not find BB-209 in human serum levels, hence the exposure must come from elsewhere.

To expand our understanding, we want to analyze serum from other domestic animals, such as dogs and horses, to cover different living conditions. The project aims to perform chemical analysis of archived serum samples from Uppsala veterinarian hospital for their content of a wide span of brominated compounds. The quality control of the sample pretreatment will be of central importance to exclude contamination of the samples, as we are surrounded of these compounds via dust. The focus will be to especially search for the sources of the BB-209, and maybe additional sample matrices will be included to confirm/reject hypothesis that emerge. The results will be important for the project and will be integrated in the final reporting.

Project credits: 30

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For more information about the MiSSE project see <http://www.aces.su.se/misse/>