



CONFIDENCE WP4a; ALKALOIDS

HP van Egmond and RC Schothorst
 Laboratory for Food and Residue Analysis (ARO)
 National Institute for Public Health and the Environment (RIVM)
 Bilthoven, The Netherlands

Introduction

The CONFIDENCE WP 4a is part of the Biotoxins cluster.

The main objectives of WP4a are:

- To develop and validate three multiplex dipstick assays for the determination of:

1. Pyrrolizidine alkaloids (PA) in honey and feed,



2. Tropane alkaloids (TA) in feed and



3. Ergot alkaloids (EA) in feed and cereals.



- To develop and validate a NIR imaging method for the detection of ergot alkaloids in feed and cereals.
- To produce simplified sample preparation protocols.
- To produce HACCP monitoring plans in the feed chain.



Targets first 18 months

6 alkaloids and antibodies

- PA: jacobine, lycopsamine
- EA: ergotamine, ergocristine
- TA: atropine, scopolamine

3 test materials

- Honey
- Feed
- Cereal



Results first 18 months

5 out of 6 alkaloids were purchased commercially. The sixth (jacobine) has been synthesized.

Three blank test materials have been selected and checked for alkaloid content.

As no naturally contaminated materials were available, these blank materials have been spiked with the alkaloids at the desired levels. Homogeneity studies still have to be done.

The production of antibodies has been partly completed (3 available) and is discussed on another poster.

Partners involved



Deliverables first 18 months

Toxins 🧐	Test materials 🧐	Antibodies 🧐
Jacobine	Honey (PA)	Jacobine
Lycopsamine	Feed (all)	Lycopsamine
Atropine	Cereal (EA)	Atropine
Scopolamine		Scopolamine
Ergotamine		Ergotamine
Ergocristine		Ergocristine



Conclusions

6 alkaloids are now available, as are the three test materials. Only 3 out of the six antibodies have been produced. The test materials still have to be checked for homogeneity. For the three missing antibodies, new immunisations are in progress.