

Rapid detection methods for securing food/feed safety at raw material level

Experiences from CONFIDENCE

Stefan van Leeuwen and Jacob de Jong

RIKILT–Institute of Food Safety, Wageningen UR (NL)

www.confidence.eu



CONFIDENCE in a nutshell

CONTaminants in *food* and *feed*:
Inexpensive DETection
for Control of Exposure



CONFIDENCE passport

- ✓ FP7 Collaborative Project first call “Food, Agriculture & Fisheries, and Biotechnology”
- ✓ Duration: May 2008 – December 2012
- ✓ 16 partners from 10 countries, representing universities, research institutes, industry and SMEs
- ✓ Coordinator: RIKILT - Institute of Food Safety, part of Wageningen UR (NL)

The consortium

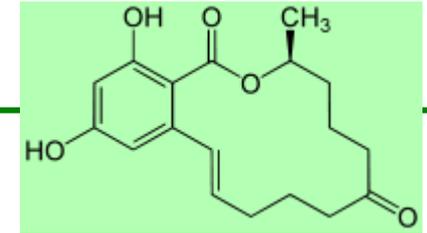


Why CONFIDENCE ?

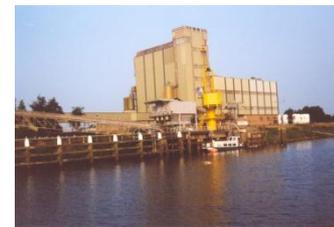
- ✓ Fast and cost-effective screening tests for contaminants in food and feed
- ✓ Example: to speed-up analysis for factory approval of raw material lots



What's the problem?

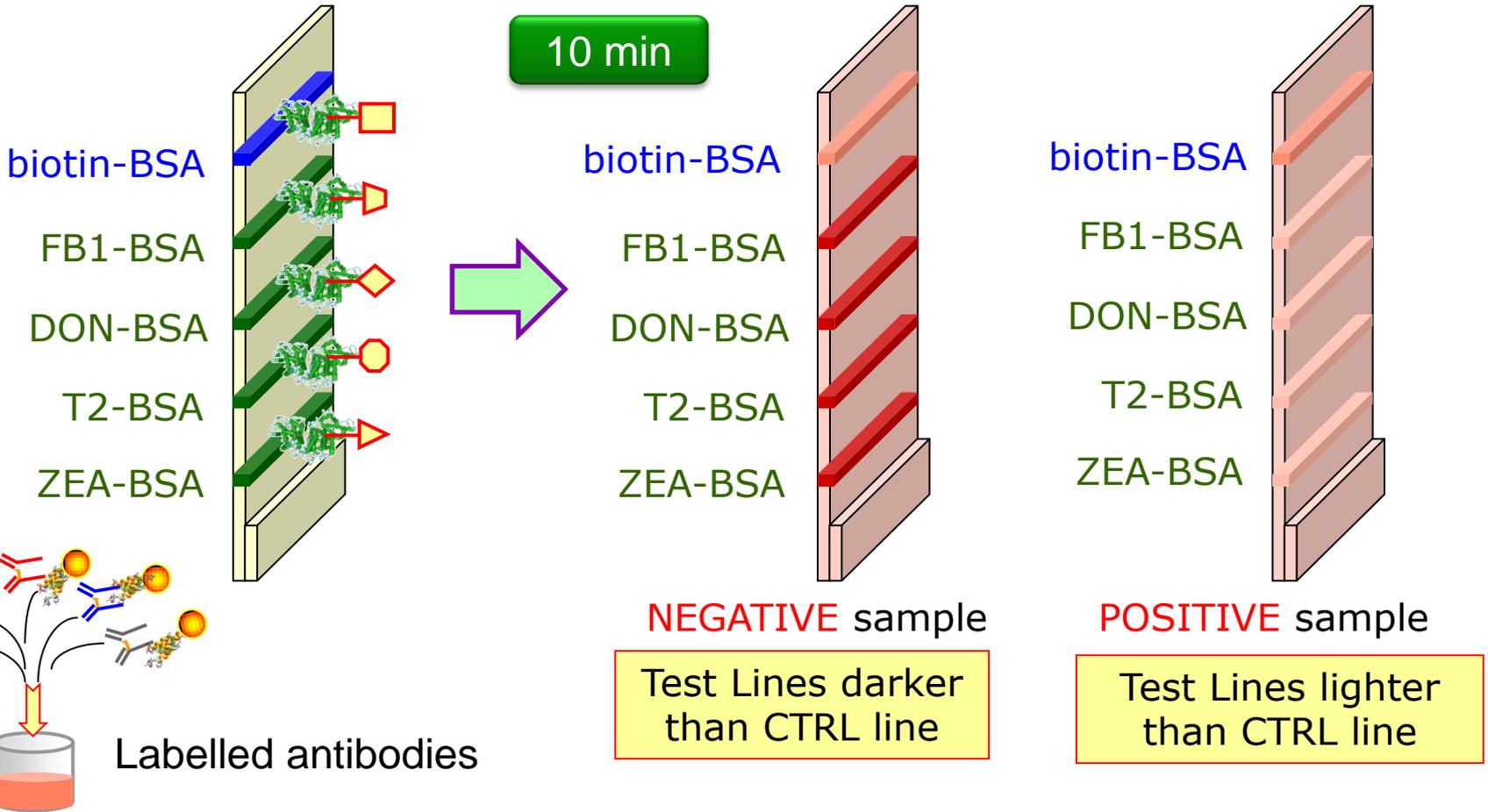


- Mycotoxins are toxic substances produced by fungi (molds) present at wheat, maize,
- Strict EU maximum residue limits for food and guidance values for feed.
- Current tests are time-consuming and need a laboratory facility at the plant
- Long clearance times for raw materials.



Multiplex dipstick for mycotoxins

➤ Indirect competitive immunoassay; 10 min incubation at 40 °C



Mycotoxins: procedure for maize feed



**Total analysis
time: 30 min**

- ✓ Add water; 2 min blending
- ✓ Add methanol; 2 min blending



Dilution and
analysis



Incubation at 40°C, 10 min
Migration, 10 min

Negative sample
positive ZEA
Positive ZEA/T2
Positive ZEA/T2/DON
Positive ZEA/T2/DON/FB1



Technology transfer experience

- SMEs contributing with practical technology
- Test marketed within project life-time

- End users (industry) in consortium
 - Defining the problem
 - Defining the solution (and conditions)
 - Field tests

Conclusions

- Focussed research through interaction with industry (end users) and SMEs
- Rapid test (30 minutes) accelerates clearance of lots

More information

Website: **www.confidence.eu**

Contact:

coordination@confidence.eu

e-newsletter

(registration on website)

Thank you for your attention !

www.confidence.eu

