eurofins

rapidust mycotoxins

A new way of sampling and testing grain lots for mycotoxins

With rapidust® Eurofins is establishing a novel dust sampling and on-site screening technology for mycotoxins in grain lots. This proprietary procedure allows taking representative samples even out of large batches.

Furthermore, the characteristics of the specific dust sample are ideal for rapid analyses on-site. Based on the fact that the contamination of the overall sample and its dust particles can be correlated, the system provides reliable results that allow fast decisions on the acceptance or rejection of grain lots.

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Basic principle

Dusts from harvesting, threshing or abrasion during transport are ubiquitous in unprocessed grain. Mycotoxins accumulate on small particles in food or feed bulk. Consequently, dusts are often highly contaminated with mycotoxins.

Our experts identified a dust fraction, in which the mycotoxin concentration correlates with the respective content in the grain. Since 2006, data models were set up and continuously improved for relevant mycotoxins in various grains. These models allow reliable calculations of the contamination in the grain based on concentrations determined in respective dust samples.

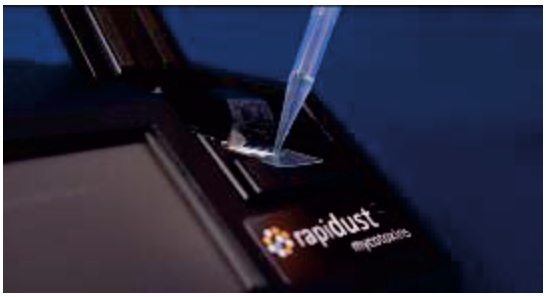
Dust sampling

For analysis of mycotoxins in grains, sampling is the most critical step in the whole analytical chain. Especially for heterogeneously distributed storage mycotoxins, common sampling procedures are either not representative or - if representative - are not competitive and applicable in terms of needed workforce and time.

Dust sampling is representative and fast. Dust samples of whole lots can easily be collected during handling processes as e.g. loading, unloading, or transportation of grain. The rapidust® sampling device separates relevant particle sizes. Due to filter-free technology, samples can directly be analysed.

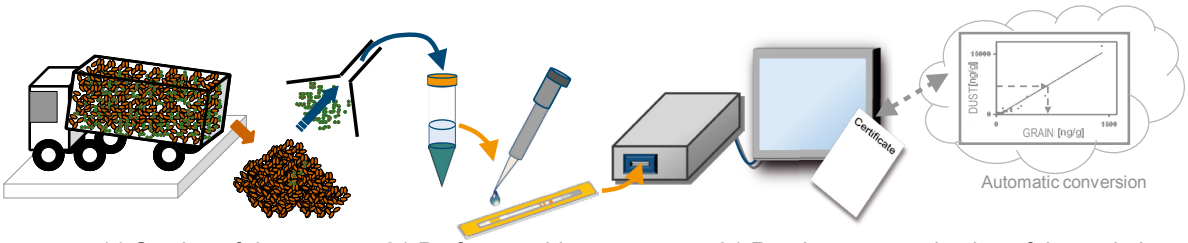
Rapid analysis

Dust samples can directly be extracted. No grinding or homogenization step is needed. The natural enhancement of the mycotoxin contamination in the dust facilitates on-site analyses of mycotoxins even at low legal limits. The rapidust® rapid tests are adapted to dust and can be read out quantitatively after few minutes (e.g. 5 min for deoxynivalenol).



Fast decision

Results of rapid tests are immediately converted and displayed as contamination of the grain lot in the rapidust® app. Hence, a reliable judgement is possible within few minutes. The customized traffic-light system of the app facilitates rapid decisions on the acceptance or rejection of tested lots and can serve as indication for process control measures. A server based data management system supports continuous monitoring and centralised quality management.



1.) Suction of dust 2.) Perform rapid test 3.) Read out contamination of the grain lot

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