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Dr. Sebastian Aurich, CEO

Customer: arotop food & environment GmbH, Germany
Arotop offers a wide range of analytical and development services for the food industry. This includes consulting and method development for customer real life needs such as rapid testing of spices as part of the trading process.

Application: Quality control of common spice varieties
This application typically quantifies moisture, ash, essential oils and individual constituents such as piperine, capsaicine and allyl-sulfide. Spice varieties include black pepper, paprika, thyme, marjoram, basil, dried garlic and dried onions.

Equipment: NIRFlex® N-500 and NIRMaster
Depending on the intended environment of the instrument set-up, BUCHI provides its FT-NIR technology in a laboratory version, the NIRFlex N-500, or in an IP protected design for the use within a production environment, the NIRMaster. Diffuse reflectance measurements of samples are performed in a petri dish which rotates during the analysis.

Benefit / Conclusion: Time savings and analysis “on site”
Compared to the conventional laboratory analysis, the NIR is much faster and samples can be analysed “on site”. For e.g. 15 samples the analysis time decreases from 2 days (lab) to less than one hour (NIR) – enough time to ensure buying decisions. A more intense screening will result in an improved product safety (adulteration). The laboratory has more time and can focus on the offspec batches. Rapid, simple, production environment compliant, NIR analysis can assess the quality of spices much faster than conventional reference methods.

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