

FOODQS GMBH

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The laboratory for Food Analytics and Quality control



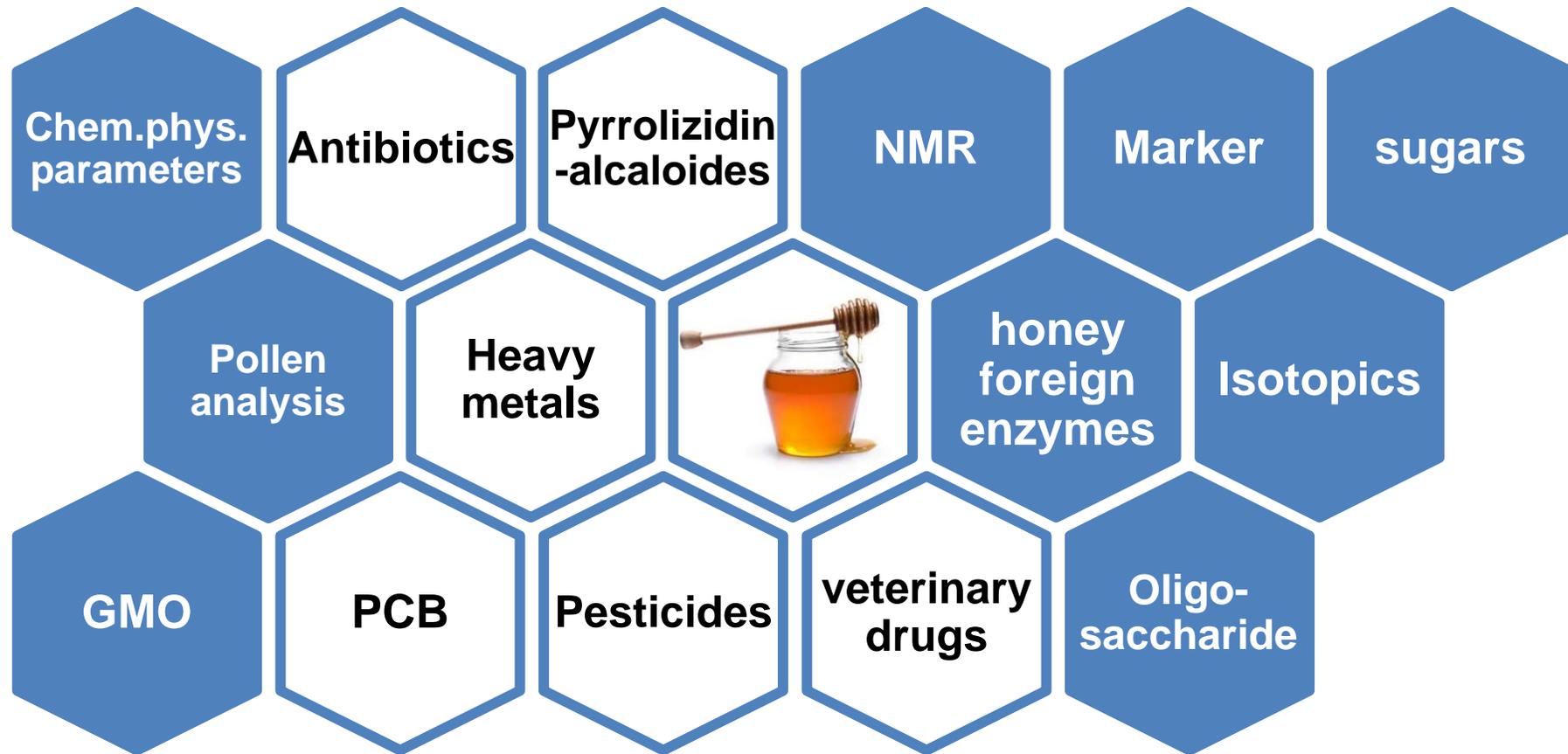
FoodQS GmbH

- Commercial lab in Germany
- More than 20 years experience in the analytics of bee products worldwide
- Further analytics
 - ❖ beeswax
 - ❖ Bee pollen
 - ❖ Royal jelly
 - ❖ Syrups e.g. Agave syrup, maple syrup...
- Accreditation to DIN EN ISO 17025



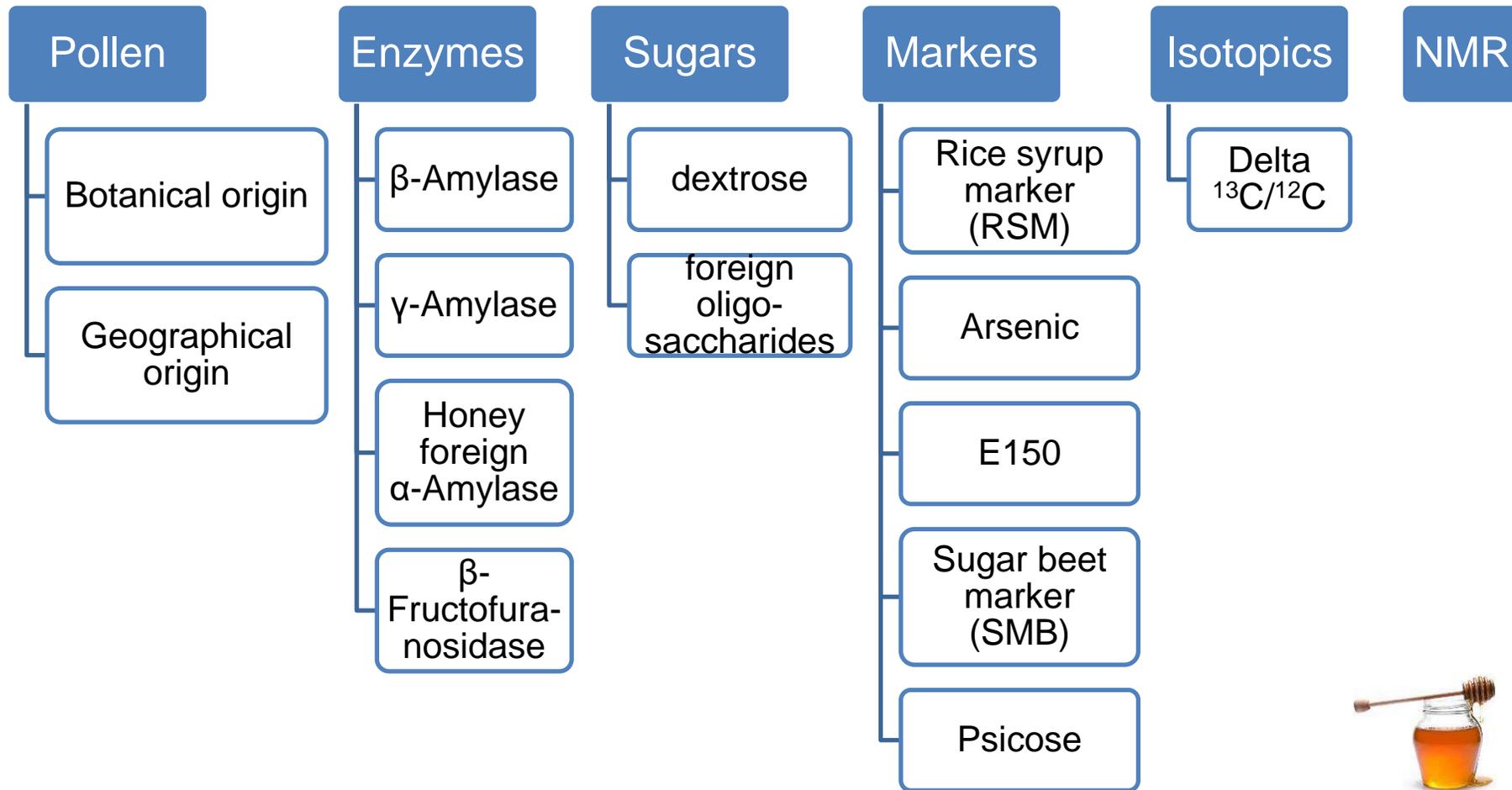


Honey analytics





Authenticity: Analytics of adulterations





LC-HRMS





Our approach using LC-HRMS since 2016

- Just for research and development
- Searching for marker substances in various syrups
- Identification of this marker substances to her correct chemical name
- Proof and checking if the substance is only available in syrups and not naturally occurring in any type of honey (honey database necessary)
- Explanation: Why is the marker substance in this syrup (way of production). Check to plausibility
- Transfer the method/ way of detection to the more sensitive LC-MS/MS (if possible)





summary

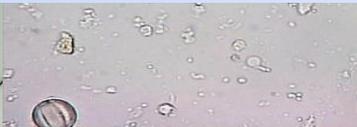
- Identification of SMB as 3-Methoxytyramin (published in July 2019 in cooperation with QSI)
- Identification of RSM as Glycosylisomaltol
- Identification of further markers (published in June 2019)

Product based on markers

- 11 marker substances in one order to get the best information regarding honey adulteration (sensitive LC-MS/MS analytics)
- different syrups were considered depending on the marker (beet sugar, rice, wheat,...)

Additional if needed: NMR analytics and isotopic analytics





The End

Thank you for your attention!

