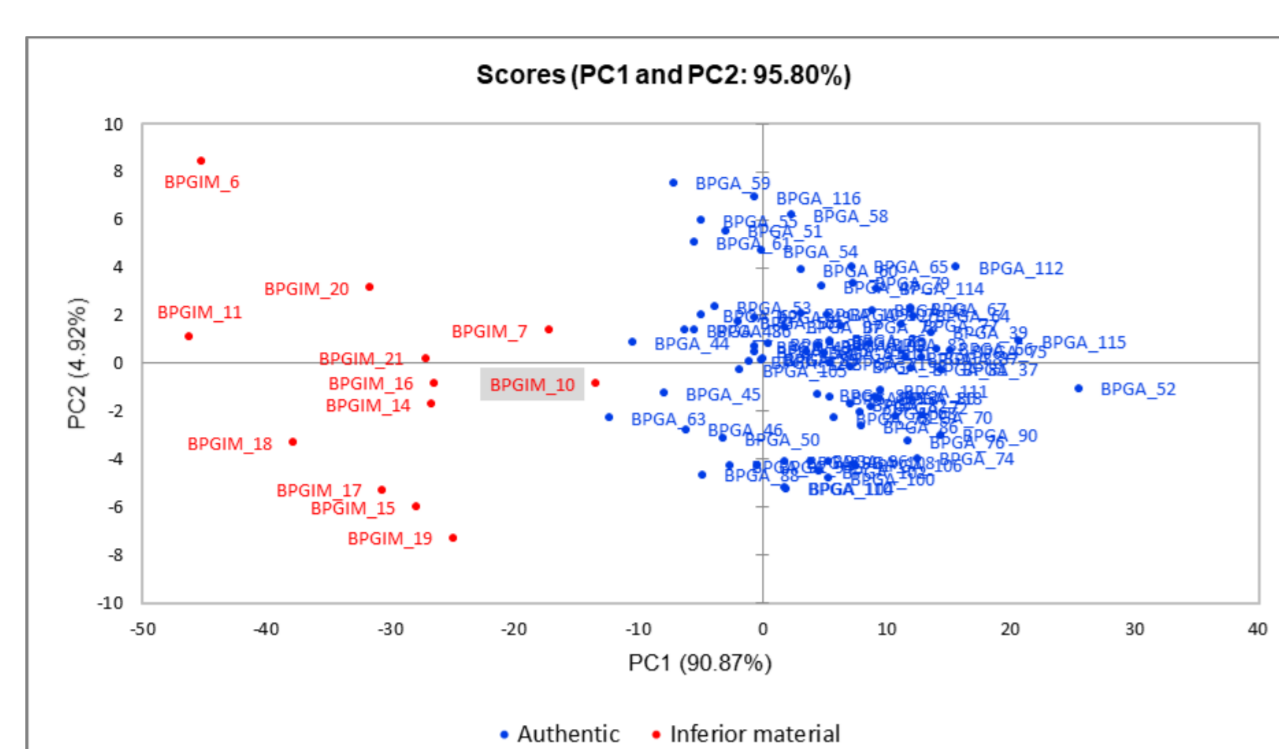


WP3: Implementation of innovations in food authenticity

SCiO molecular
sensor

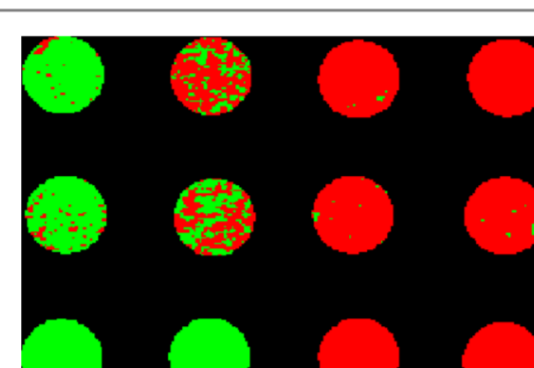


Specim IQ HSI
camera



	1	2	3	4
A	10%	25%	50%	75%
B	10%	25%	50%	75%
C	0%	0%	100%	100%

(C1 and C2) Authentic pepper with 0% adulterant added;
(C3 and C4) Pure adulterants.



- Transfer of UHPLC-QqQ-MS/MS for dyes detection
- Portable/handheld light spectroscopy devices



Result: Classification of authentic vs. fraudulent or inferior samples



Prospect: Fast, on-site screening for the detection of fraudulent spices

Wine



BfR, CNRIFFI, NCIQ,
JRC, PolyU

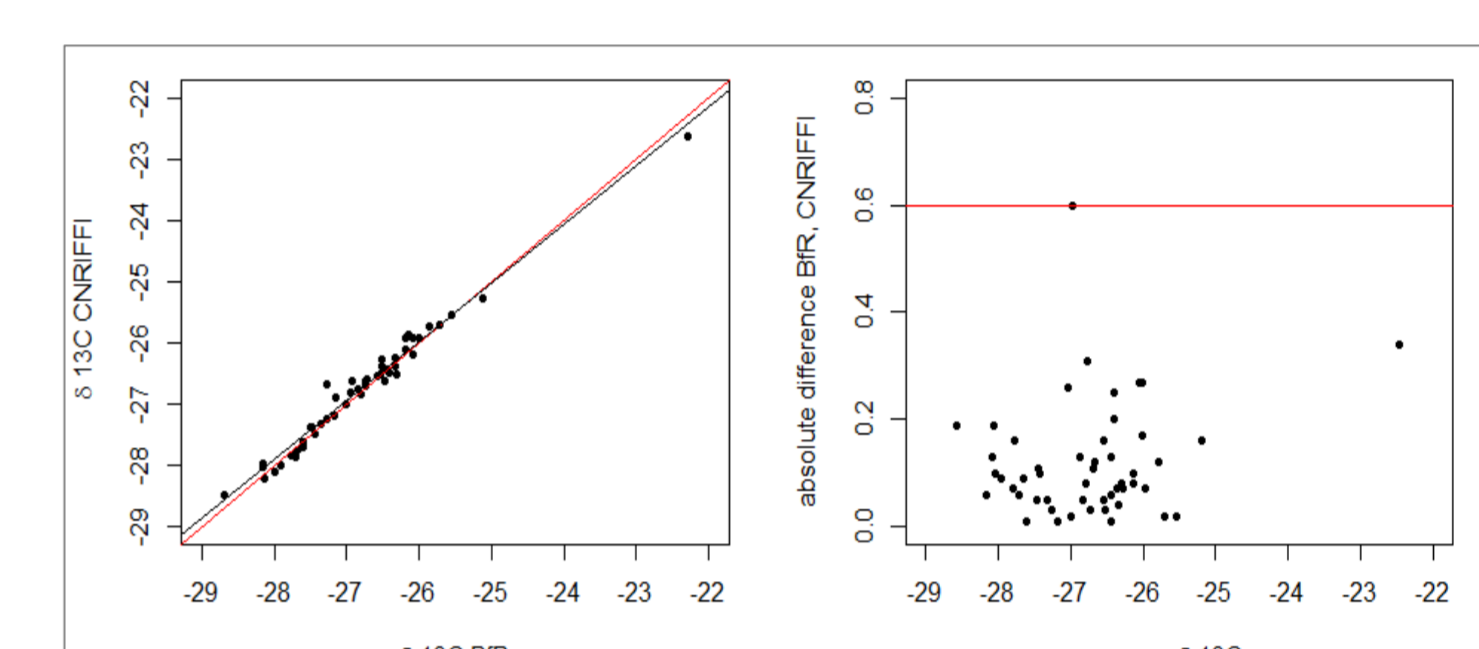
- SNIF-NMR, ^{18}O -wine water, ^{13}C -wine ethanol
- Technical by-products, shikimic acid, anthocyanin pattern
- Non-targeted ^1H -NMR spectroscopy



Result: Successful method establishment & measurement comparison



Prospect: CNRIFFI to become a reference wine authenticity laboratory & improved wine control between EU & China



Five key products



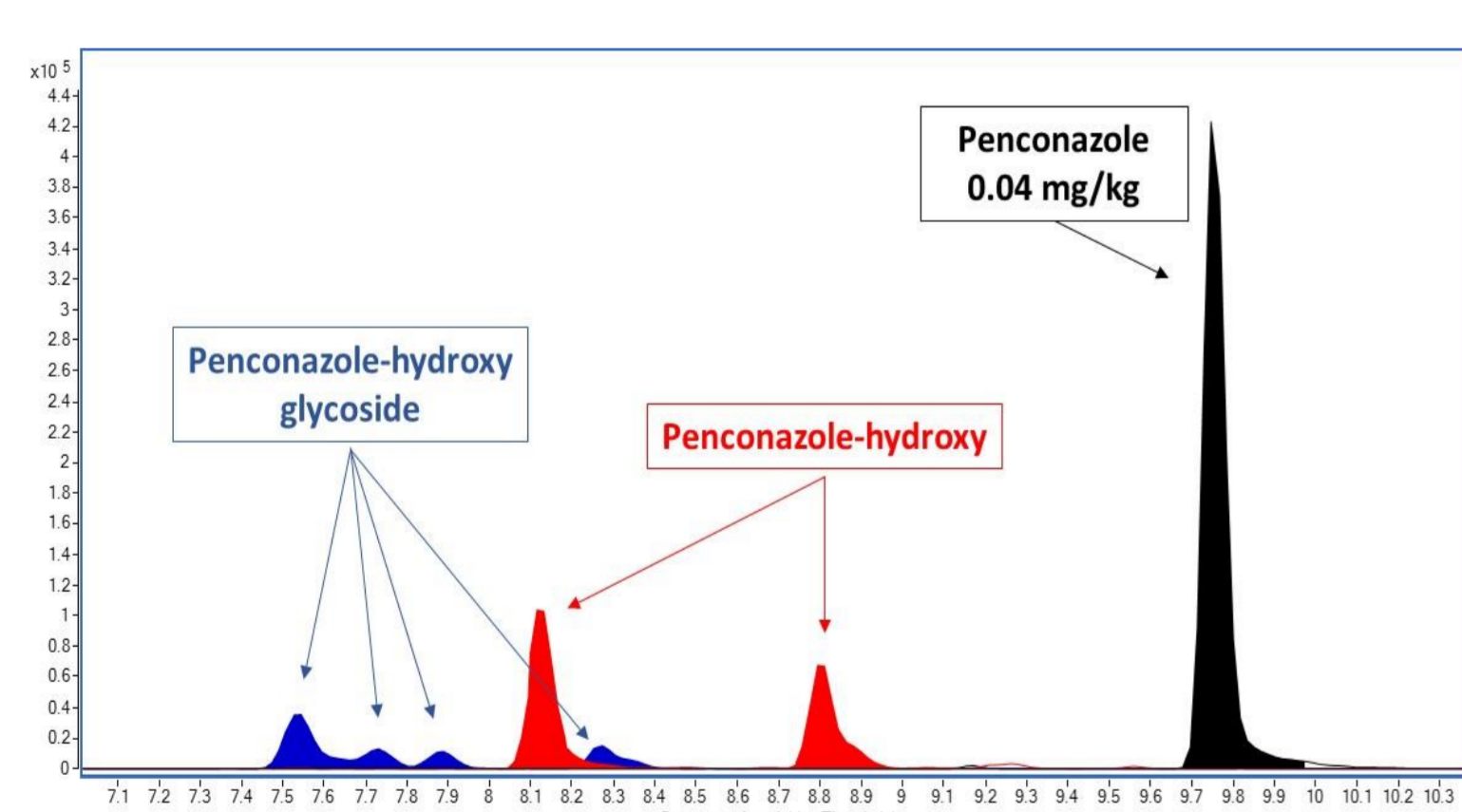
Spices



WU, QUB, Nestlé,
BJCDC



Penconazole & its metabolites
present in a grape sample



**Organic fruits &
vegetables**



VSCHT, CAIQ

- U-HPLC-HRMS/MS methodology to determine pesticide metabolites



Result: SOP for detecting unbiased markers of pesticide use

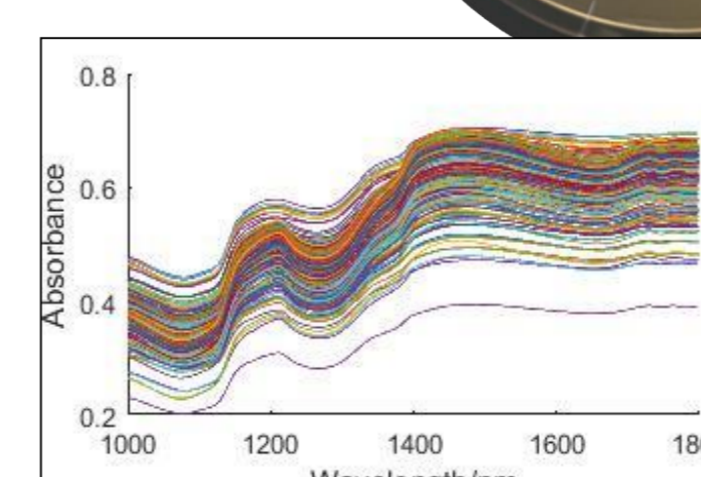


Prospect: Identification of illegal use of synthetic pesticides



www.euchinasafe.eu

SupNIR-1520
Spectrometer



Dairy formula



ZJTH, QUB, CFSA, USP,
Nestlé & Danone



- LC-MS (non) protein contents
- GB standard publishing



Result: SOPs & patents for detection of various protein additions



Prospect: GB standard for whey proteins & improved dairy control



CMRC, Nestlé, CAIQ, QUB

Processed meats

- LC-MS/MS methodology for additives
- Spectroscopic screening for ground beef adulteration



Result: Methodology for detection of additives & adulteration



Prospect: Portable NIR as screening tool for adulterated beef patties



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Disclaimer: The content of this presentation does not reflect the official opinion of the European Commission and/or the Chinese government. Responsibility for the information and views expressed therein lies entirely with the author(s).