

Fruits & Vegetables Analyzer

Sensory & Chemical Testing

As natural products, the sensory quality of fruits and vegetables is strongly influenced by the origin, the variety, the growing and harvest conditions, the maturity and can thus vary a lot.

To be able to offer the best sensory quality to consumers, industrials need objective and efficient testing methods to evaluate fruits and vegetables.

Alpha MOS Analyzers provide fast and flexible solutions for manufacturers and food industrials to evaluate the chemical and sensory properties of these products.



Objective & sensitive evaluation

Instrumental measurement produces reliable results and allows to detect odor compounds at very low concentrations.

Simple method

Sample preparation, which consists in placing some grams of product in a vial, is very easy.

Fast analyses, high throughput

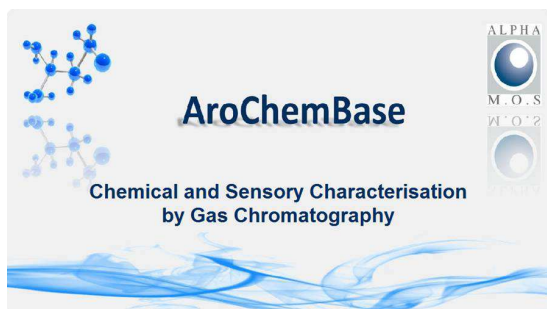
In routine analysis, the e-nose analyzer can test a sample every 8 minutes, 24h/7d.

Data & product traceability

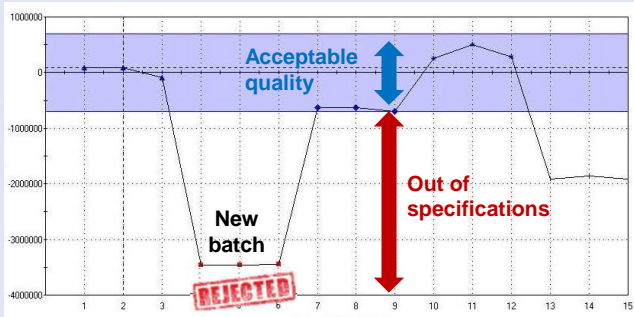
Through data storage within the monitoring and processing software, it is easy to trace products testing.

A powerful decision tool

- Benchmarking models for comparing the aroma profiles of several products (different varieties, origins, growing conditions, harvest times...)
- Exploration database (AroChemBase) for determining the chemical compounds involved and related sensory notes
- Shelf life models for evaluating the changes of sensory features over time and ripening
- Qualitative models for accepting or rejecting products based on determined organoleptic specifications
- Quantification models for determining a compound concentration or a sensory score
- Multi-applications system

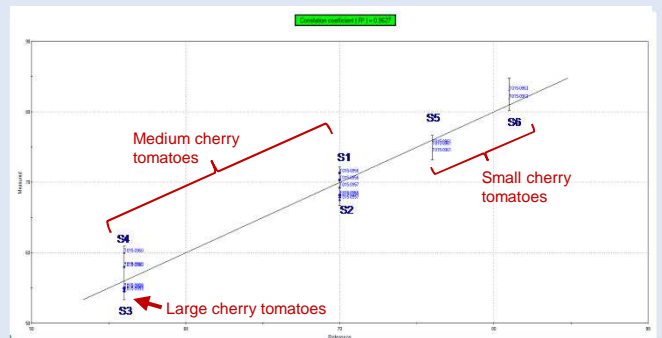


QUALITY CONTROL



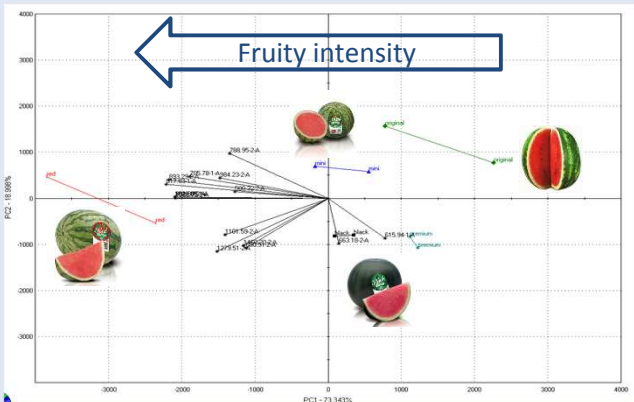
Pass / Fail Quality control model for determining the grade of a product and decide whether to accept or reject it

SENSORY PROFILING



Quantitative model for predicting the flavor intensity of different varieties of tomatoes

BENCHMARKING OF DIFFERENT VARIETIES

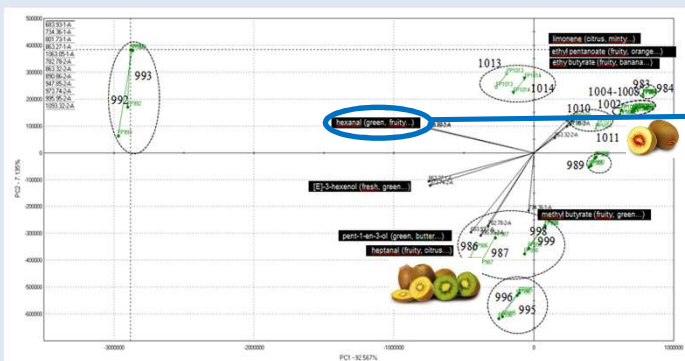


Comparison of the overall sensory profile of different varieties of watermelon

K1 MXT-5 (± 20)	K1 MXT-1701 (± 20)	Possible Identification	Descriptor
449	488	methanethiol / acetaldehyde	cheese, sulfurous / ethereal, fruity, fresh
533	600	methyl acetate	black currant, ethereal, fruity
615	664	ethyl acetate	caramelized, fruity, sweet
706	789	methyl butanoate	ester, ethereal, fruity, green, sweet
813	881	cis-3-hexenal	green
817	893	butyl acetate	fruity, green, sweet, ethereal
908	985	heptanal	citrus, fruity, green
918	985	2,6-dimethylpyrazine	cocoa, fruity
1004	1071	hexyl acetate	fruity, green, acidulous
1029	1103	octanal	aldehydic, floral, fruity, green
1130	1210	limonene oxide	floral, fruity
1197	1281	decanal	aldehydic, floral, green
1197	1300	6-decanal	cucumber

List of the main odorous compounds detected and identified in the watermelons

SENSORY CHARACTERIZATION



Comparison of the overall sensory profile of different varieties of kiwis with chemical compounds responsible for the differences

Detailed data for a compound (hexanal): chemical information, sensory descriptors, human odor detection threshold, etc

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