

# International Olive Oil Award - Zurich

## Opportunities and risks in the assessment and interpretation of sensory data

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As in the sensory assessment of all foods, so also in the evaluation of olive oil: large quantities of data are collected which require correct evaluation and appropriate graphical display. The statistical parameters which must be calculated to allow fundamental evaluation of the data collected are the following:

- Median
  - a value in an ordered set of values below and above which there is an equal number of values, or which is the arithmetic mean of the two middle values if there is no one middle number
- Mean
  - Average of all the individual values
- Standard deviation
  - Measure of the spread of data around the mean

To allow detailed interpretation, following methods of data evaluation should be used:

- t-Test / variance analysis
  - Test for the difference between 2 or more products
  - Consideration of a selected attribute (univariate)
- Main component analysis
  - Calculation of the total variability of several products
  - Representation in 2-dimensional space
    - Positioning of the products on the basis of their sensory properties
  - Consideration of several attributes at the same time (multivariate)
- Preference Mapping
  - Correlation analysis between objective and subjective data
    - Profiling
    - Consumer test
  - Representation in 2-dimensional space (→ map of preferences)
    - Positioning of the products on the basis of sensory attributes
    - Positioning of preferences (cluster)
  - Consideration of several attributes at the same time (multivariate)