

Tasting Session

Sensory Evaluation of Extra Virgin Olive Oil

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Topics

- Sensory evaluation
 - what is it?
 - its role in olive oil production
 - How to taste
 - Recognising the positive attributes
 - Tasting for flavour and style
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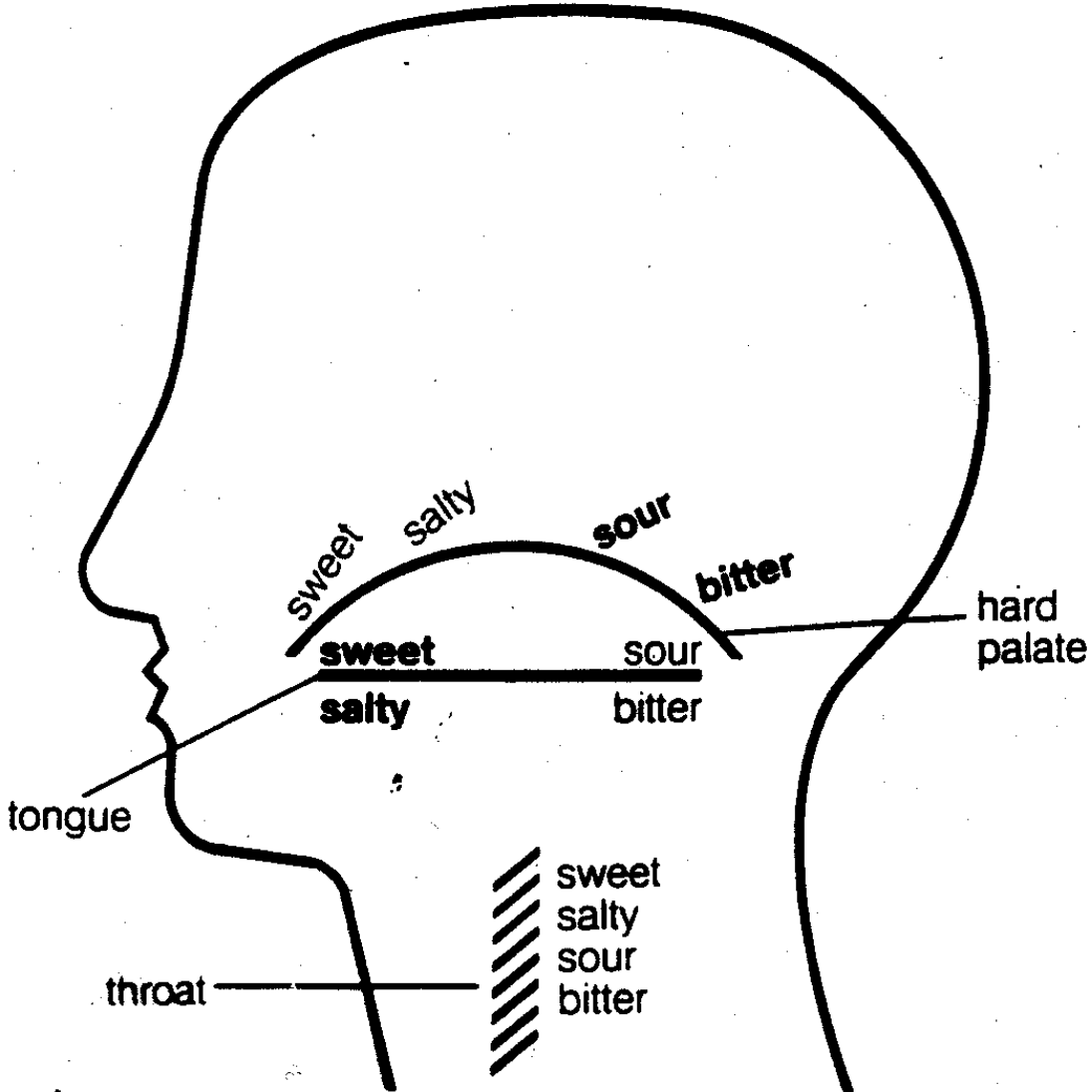
Sensory Evaluation

“A scientific discipline concerned with using the human senses to examine aspects related to the eating qualities of a food”

Sensory Evaluation

- Sight – very important in initial assessment of food
 - Colour is vital for our acceptance or rejection
 - Smell / Aroma – detected before and while eating
 - Individuals vary greatly in their sensitivities to aromas
 - Taste
 - Four types of taste receptors – sweet, sour, salt and bitter – located on the tongue, sides of the mouth and on the palate
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Taste



Sensory Evaluation

Types:

- **Trained Panel** – IOOC requirement
 - **Consumer Panel** – used for product preference or acceptability information
 - **Informal Assessment** – important for:
 - developing a ‘sensory memory’
 - evaluating your own oils
 - benchmarking
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Olive Oil Tasting

- Needs to be objective even if “informal”
 - Necessary to:
 - appreciate the character and personality of olive oils
 - recognise the characteristics of high quality evoo
 - identify defects
 - identify the type of oil you wish to produce
 - provide a consistent product for the market
 - write label descriptions and product descriptors
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Factors influencing the aroma & flavour of olive oil

- ✓ Olive variety / soil / climate / pests
 - ✓ Harvesting time & techniques
 - ✓ Olive processing techniques
 - ✓ Storage
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Olive Variety

- Varieties have:
 - distinct characteristics
 - different levels of volatile and phenolic substances
 - different ripening times
 - more or less resistance to pests and diseases
 - different tolerance to cold temperatures or drought

All of these factors can influence flavour

Substances responsible for aroma & flavour

- Phenolic substances – bitter and pungent
- Volatile substances – pleasant and unpleasant

Total content : 0.10 – 0.15

Harvesting Time & Techniques

- Changes that occur within the fruit during ripening impact on the flavour of the oil
 - The oil from high % green or straw-coloured fruit will have strong green fruity flavours usually with moderate to high levels of bitterness and pungency – intense style oil
 - Oil from ripe black olives will generally have very mild, sometimes nutty flavours and low levels of bitterness and pungency – delicate style oil
 - Good harvesting techniques protect the fruit from damage that can lead to defects in oil
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Processing Techniques

- Poor techniques such as
 - dirty plant and equipment
 - 'old' or dirty mats
 - residues in storage containers – either from cleaning materials or last season's oil
 - large quantities of water added during processing

all impact on the flavour

Storage

- Oils will lose some aroma and flavour as they age
 - Correct storage is essential to retard aroma and flavour changes
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Positive Attributes (IOOC)

■ Fruity

Characteristic of oil made from sound fresh olives, either ripe or unripe. Flavour varies depending on variety and ripeness

■ Bitter

Characteristic of oil made from green olives or those turning colour

■ Pungent

Biting sensation usually in oils pressed from partly ripe olives - perceived at the back of the throat

Positive Attributes

These are perceived in the mouth and through the back of the nose

Tasting

- We use both our noses and mouths to assess oils
 - Aroma – how does it smell?
 - Flavour – how does it taste?
 - Balance and harmony
 - Complexity
 - Persistence

Note: Colour is not an indicator of oil quality

Standard IOOC Tasting Glass & Cover

Used by:

- sensory panels
- competition judges



Aroma

Our noses can tell us a great deal!

- The aroma should be:
 - very pleasant and enticing
 - predominantly of olive fruitiness – green or ripe
 - associated with other familiar smells, such as fruits, grass, salad leaves, herbs, fresh nuts
 - balanced – nothing ‘jumping out’
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Flavour

- Fresh new oils tend to be at their highest flavour level
- Dominant flavour – olive fruitiness (green or ripe)

Plus:

- **flavours reminiscent of other foods** eg: fruits, salad leaves, herbs, grass, tomatoes, fresh nuts
- **bitterness**
- **pungency / pepperiness**
- Balance and harmony are very important

Complexity & Persistence

Complexity:

- an enticing and interesting range of flavours – typical of those expected in evoo
- multi-dimensional

Persistence:

- a very pleasant lingering aftertaste
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Style

NZ has regional styles of oils.

Currently less variation is apparent than in the northern hemisphere

Style

Depends on:

- climate – oils from warmer areas differ from those produced in cooler regions
 - olive variety
 - harvesting time
 - whether a blended oil or a single varietal
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Style

■ Intense:

- typical of oils from cooler regions or cooler years
 - fruit likely to have been picked when a high percentage has just begun to ripen
 - full-bodied with complex, robust and intensely fruity aromas, and flavours
 - fruitiness from 'green olive fruity' to green apples through to citrus (lime and lemon)
 - grassiness and/or herbaceous aromas and flavours
 - bitterness and pungency
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Style

■ Medium

- typical of oils from moderate to cool regions
 - usually pressed from a mix of fruit with varying degrees of ripeness – straw to blush, purple and black
 - complex and well rounded with moderately intense aromas and flavours
 - fruitiness may range from ‘green olive fruity’ to apples through to tomatoes
 - some grassiness and/or herbaceous aromas and flavours
 - moderate bitterness and pungency.
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Style

■ Delicate

- similar to oils from warmer olive growing regions
 - usually from warmer areas in New Zealand or when a high proportion of fruit picked when fully ripe
 - 'gentle' in character
 - should have good ripe olive fruity aromas and flavours, often with underlying stone fruit or tropical fruit characters. Oils could have fresh nutty overtones
 - may have very little or no bitterness and pungency
 - should be complex and well balanced
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Tasting Guidelines

When you are going to taste olive oils:

- Don't smoke, eat or drink anything other than water for at least 30 minutes prior to tasting
 - Don't wear / use perfumes, after-shave, hand lotions and strong smelling cosmetics or soap etc that may affect your ability (or that of people near you) to detect aromas
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Tasting Guidelines

■ Prepare the oil/s you want to taste

The ideal temperature for the oil for tasting is $28^{\circ}\text{C} +$ or $- 2^{\circ}\text{C}$. If cold, stand the bottles in warm water for a few minutes to increase the temperature of the oils.

Pour 5 – 20 mL of oil into a small glass (preferably one without a stem so that you can hold it in the palm of your hand). Cover the glass (use a glass cover, plastic lid or even a circle of firm cardboard). Leave the oil/s covered until ready for assessment. Use the same type of glass and cover for each oil. Label or code each oil.

Tasting Guidelines

- Sit comfortably in a quiet environment free from odours and distractions
 - If you are tasting with other people, avoid communicating with them until everyone has finished tasting.
 - Unless you are assessing oil for defects, there are no right or wrong answers
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Tasting Techniques

1. Assess the aroma

Hold the base of the glass in the palm of your hand and swirl the oil gently. (This helps to warm the oil and release the volatile components.) Lift the lid and take slow deep breaths to evaluate the aroma of the oil. Sniff gently for no longer than 30 seconds

Tasting Techniques

2. Evaluate the flavour

Take a small sip (about 5mL), distribute the oil around your mouth, then take short successive breaths to draw air in. Close your mouth and breath out through your nose. (This allows the volatile compounds to be perceived retronasally.)

Tasting Techniques

2. Evaluate the flavour

Swallow or spit out.

Swallowing is optional but preferable to allow for the adequate assessment of bitterness and pungency

Tasting Techniques

3. Score the sample

Use a score sheet that is appropriate for your needs

or

Make detailed notes describing the oil/s as you taste them

Note firstly that the oil is or is not free from defects. If defect free, comment on the aromas and flavours you perceive, then the complexity, balance and style.

Tasting Techniques

- **Clear your palate**

Chew a piece of apple and have a drink of filtered water – still or carbonated – not mineral water

Extra Virgin Olive Oil Tasting Sheet

Sample Code :

Date :

Please evaluate the sample and fill in the sheet.

Does the sample have a defect? (please circle) **YES** **NO** **Defect:** _____

AROMA:

Olive fruitiness: | _____ |
min min max

Other Positive Aromas: | _____ |
min min max

Green (grass / leaves) Apples Other Fruits Vegetables Herbs
Tomatoes

Balance / Harmony: | _____ |
min min max

Extra Virgin Olive Oil Tasting Sheet (cont)

FLAVOUR

Olive fruitiness | _____ |
min min max

Other Positive Flavours: | _____ |
min min max

Green (grass / leaves) Vegetables Apples Herbs Fresh Nuts

Tomatoes Bananas Melons, pears, or other fruits

Bitterness: | _____ |
min min max

Pungency (Pepper): | _____ |
min min max

Balance / Harmony: | _____ |
min min max

Complexity: | _____ |
min min max

Persistence: | _____ |
min min max

Style: (please circle) DELICATE MEDIUM INTENSE

Comments:
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Thank you