



**INTERNATIONAL
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COUNCIL**

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SENSORY ANALYSIS OF OLIVE OIL

STANDARD

**GENERAL METHODOLOGY FOR THE ORGANOLEPTIC ASSESSMENT OF
VIRGIN OLIVE OIL**

1. PURPOSE

The purpose of this standard is to stipulate the prior knowledge required to perform the sensory analysis of virgin olive oils, to standardise the conduct of, and procedure followed by, the tasters participating in such tests and to specify the duties of the panel supervisor.

2. DUTIES OF THE PANEL SUPERVISOR

The panel supervisor shall be a suitably trained, knowledgeable person who is an expert on the kinds of oils which he will come across in the course of his work. He is the key figure in the panel and is responsible for its organisation and running. He shall summon the tasters sufficiently in advance and shall answer any queries regarding the performance of the tests, but shall refrain from suggesting any opinion to them on the sample.

He shall be responsible for inventorying the apparatus, and for ensuring that it is properly cleaned, for preparing and coding the samples and presenting them to the tasters in accordance with the appropriate experimental design, as well as for assembling and statistically processing the data obtained.

The work of the panel supervisor calls for sensory skill, meticulousness in the preparation of the tests, flawless organisation for their performance and skill and patience in the planning and execution of the tests. It is the duty of the panel supervisor to motivate the panel members by encouraging interest, curiosity and a competitive spirit among them. He shall ensure that his opinion is not known and shall prevent possible leaders from asserting their criteria over the other tasters. He shall also be responsible for selecting, training and monitoring the tasters in order to ascertain their level of aptitude. To do so, he shall refer to the standard COI/T.20/Doc. no. 14, "Guide for the selection, training and monitoring of skilled virgin olive oil tasters".

3. TEST CONDITIONS

3.1. Presentation of the sample

The oil sample for analysis shall be presented in standardised tasting glasses conforming to the standard COI/T.20/Doc. no. 5 "Glass for oil tasting".

The glass shall contain 15 ml of oil and shall be covered with a watch-glass.

Each glass and its attendant watch-glass shall be marked with the same randomly chosen code made up of digits or a combination of letters and digits. The code will be marked with an indelible, odourless pencil.

3.2. Test temperature

The oil samples intended for tasting shall be kept in the glasses at $28^{\circ}\text{C} \pm 2^{\circ}\text{C}$. This temperature has been chosen because it makes it easier to observe organoleptic differences than at ambient temperature, when oils are used as a condiment. Another factor that weighs in favour of this value is that at lower temperatures the aromatic compounds peculiar to these oils volatilise poorly while higher temperatures lead to the formation of volatile compounds peculiar to heated oils.

3.3. Test times

The morning is the best time for tasting oils. It has been proved that there are optimum perception periods as regards taste and smell during the day.

Meals are preceded by a period in which olfactory-gustatory sensitivity increases, whereas afterwards this perception decreases.

However, this criterion should not be taken to the extreme where hunger may distract the tasters, thus decreasing their discriminatory capacity.

4. TASTERS: GENERAL RULES OF CONDUCT

The people acting as tasters in the organoleptic tests carried out on olive oils shall be selected and trained in accordance with their skills in distinguishing between similar samples; it should be borne in mind that their accuracy will improve with training (see appropriate section).

8-12 tasters are required for each test, although it is wise to keep some extra tasters in reserve to cover possible absences.

The following recommendations apply to the conduct of the tasters during their work.

When called by the panel supervisor to participate in an organoleptic test, the taster should be able to attend at the time set beforehand and shall observe the following:

- 4.1. He shall not smoke at least 30 minutes before the time set for the test.
- 4.2. He shall not use any perfume, cosmetic or soap whose smell could linger until the time of the test. He shall use an unperfumed soap to wash his hands which he shall then rinse and dry as often as necessary to eliminate any smell.
- 4.3. He shall fast at least one hour before the tasting is carried out.
- 4.4. Should he feel physically unwell, and in particular if his sense of smell or taste is affected, or if he is under any psychological effect that prevents him from concentrating on his work, the taster shall inform the panel supervisor accordingly with a view to being withdrawn from the test or to the appropriate decisions being taken, bearing in mind the possible deviation in the mean values for the rest of the panel.
- 4.5. When he has complied with the above, the taster shall take up his place in the booth allotted to him in as orderly and quiet a manner as possible.
- 4.6. He shall carefully read the instructions given on the profile sheet and shall not begin to examine the sample until absolutely sure about the task he has to perform. If any doubts should arise, he shall discuss the difficulties encountered privately with the panel supervisor.

- 4.7. The taster shall pick up the glass, keeping it covered with the watch-glass, and shall bend it gently; he shall then rotate the glass fully in this position so as to wet the inside as much as possible. Once this stage is completed, he shall remove the watch-glass and smell the sample, taking slow deep breaths to evaluate the oil under assessment. Smelling shall not exceed 30 s. If no conclusion has been reached during this time, he shall take a short rest before trying again. When the olfactory test has been performed, the taster shall then evaluate the flavour (overall olfactory-gustatory-tactile sensation). To do so, he shall take a small sip of approximately 3 ml of oil. It is very important to distribute the oil throughout the whole of the mouth cavity, from the front part of the mouth and tongue along the sides to the back part and to the palate support and throat, since it is a known fact that the perception of the four primary tastes (sweet, salty, acid and bitter) varies in intensity depending on the area of the tongue, palate and throat.

It should be stressed that it is essential for a sufficient amount of the oil to be spread very slowly over the back of the tongue towards the palate support and throat while the taster concentrates on the order in which the bitter and pungent stimuli appear; if this is not done, both of these stimuli may escape notice in some oils or else the bitter stimulus may be obscured by the pungent stimulus.

Taking short, successive breaths, drawing in air through the mouth, enables the taster not only to spread the sample extensively over the whole of the mouth but also to perceive the volatile aromatic compounds via the back of the nose.

The tactile sensation of pungency shall be taken into consideration.

- 4.8. When organoleptically assessing a virgin oil, it is recommended that **ONLY ONE SAMPLE** be evaluated in each session with a maximum of three sessions per day, to avoid the contrast effect that could be produced by immediately tasting other samples.

As successive tastings produce fatigue or loss of sensitivity, it is important to use a product that can eliminate the remains of the oil from the preceding tasting from the mouth.

The use of a small slice of apple (about 15 g) is recommended which, after being chewed, can be spat out into the spittoon. Then rinse out the mouth with a little water at ambient temperature. At least 15 minutes shall lapse between the end of one tasting and the start of the next.
