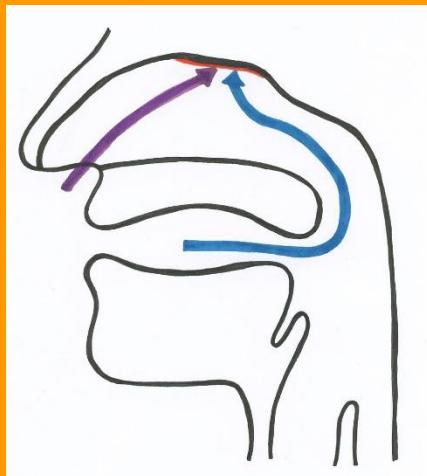


RETRO-OLFACTION

1. DEFINITION



Retro-olfaction corresponds to the passage of volatile aromatic compounds from the oral cavity to the nasal cavity via the nasopharynx ("the back of the throat"), mainly during exhalation after swallowing. It allows you to perceive aromatic nuances different from those detected by ortho-olfaction (inhalation through the nostrils before mouthfulness). It allows you to perceive **aromatic nuances** that were not necessarily obvious during the tasting by ortho-olfaction.

2. HOW TO ENJOY A GOOD RETRO-OLFACTION?

Retro-olfaction can only be fully appreciated if **certain conditions are met**. Taking the spirit into the mouth too quickly, premature swallowing, poorly controlled breathing, or a premature swallowing significantly reduces retronasal aromatic perception. Conversely, a methodical tasting, including a **gradual introduction to the palate**, **perfectly controlled oxygenation**, **sufficient time in the mouth**, and **slow exhalation through the nose**, reveals the full complexity of volatile compounds. Without this rigorous protocol, retro-olfaction remains incomplete, confused, or diminished, and only imperfectly conveys the organoleptic richness of the spirit.

With a little practice, you will follow these steps automatically. Here are the 4 steps.

2.1. PREPARE YOUR MOUTH AND BREATHING : keep the whisky in your mouth .

- Take a very small sip (2–3 ml is enough).
- Oral temperature, agitation, and salivary dilution will promote the volatilization of esters and aldehydes responsible for aromas.
- **Keep your mouth closed** for about 2 to 5 seconds while **breathing calmly through your nose** (normal inhalation and exhalation) to get used to the alcohol and avoid its trigeminal action (burning, tingling).
- **Allow the whisky to warm up** in your mouth; the heat and saliva will release more volatile compounds during these few seconds.

2.2. AERATION IN THE MOUTH OF THE WHISKY

This step is not mandatory for tasting whisky, but it can be helpful in facilitating the perception of some aromas. However, it should be carried out **gently and carefully**, especially if the whisky has a high alcohol content (over 50% ABV).

- **While the whisky has been in your mouth since step 1 , draw in a very small stream of air**, as if you were drawing air through a straw. (This is impossible to do properly if you have too much whisky in your mouth.)
- This air passes into the mouth, becomes infused with aromas, and promotes their evaporation while **the whisky remains in the mouth**.
- The introduction of air increases the exchange surface area and the volatilization of aromatic molecules.
- Gently **circulate the whisky all over your tongue and against your cheeks**, as if you were "chewing" it.

Aeration is commonly used during **wine tasting** . However, wine never reaches an alcohol content of 40%. Aeration should be **much more moderate with spirits** due to their higher alcohol concentration.

Indeed, this ventilation **increases the release of volatile compounds** and **the evaporation of ethanol** . Ethanol strongly stimulates the trigeminal system, which can cause painful burning or tingling sensations that may mask the delicate aromas. This is why ventilation should be **gentle and moderate** .

2.3. SWALLOWING

- When the **aromas have fully developed** , swallow the sip in one go, without breathing in.
- Swallowing **briefly closes the airways** (elevation of the larynx and closure of the epiglottis) and **concentrates the compounds aromatics** in the back of the mouth.
- Keep your mouth closed for 1 to 2 seconds , without breathing , to **allow the volatile compounds to stabilize**.

2.4. EXHALATION THROUGH THE NOSE: RETRONASAL -OLFACTION

- Keeping **your MOUTH CLOSED** , **exhale SLOWLY through your nose** , with a soft and continuous breath.
- This controlled expiration **carries away the aromatic compounds volatiles** present in **the back of the mouth towards the olfactory epithelium via the retronasal pathway**.
- It is this phase that fully reveals the aromatic persistence and refines the perception of the finish.
- Focus on the **nature , intensity and evolution of the aromas** perceived.

3. MISTAKES TO AVOID DURING RETRO-OLFACTION

To succeed in retro olfaction, it is mainly a matter of avoiding certain gestures that limit the perception of aromas or saturate the nose.

3.1. BREATHING AND SWALLOWING ERRORS

- **Inhaling deeply while swallowing** : this propels the alcohol to the back of the throat, accentuates the burning sensation and inhibits subtle aromatic perceptions instead of revealing them.
- **Exhale too forcefully through the nose**: too rapid a flow of air carries away aromatic compounds without giving them time to be analyzed; only the alcoholic heat then dominates the perception.
- **Taking too large sips**: swallowing becomes rushed, breathing becomes disorganized, and retro-olfaction loses precision and intensity.
- **Forgetting the short pause after swallowing** : exhaling immediately or speaking without waiting, reduces the optimal phase of aromatic emergence, a key moment in sensory expression.

3.2. ERRORS IN RHYTHM AND QUANTITY

- **Drinking too quickly and taking sips in quick succession**: the palate gradually becomes saturated, the alcohol has an anesthetic effect and retro-olfaction loses its finesse, becoming poor or uniform.
- **Holding a high alcohol content (ABV) whisky in your mouth for too long time**: the burning sensation dominates and masks all the aromatic compounds, leaving only an excessive thermal perception.

3.3. ERRORS RELATED TO GLASS AND THE ENVIRONMENT

- **Using a glass that is too wide or of the tumbler type**: the aromatic compounds disperse excessively and do not concentrate sufficiently at the entrance of the nasal cavities, which limits the precision of retro-olfaction.
- **Use a glass with a very narrow neck** : excessive concentration of ethanol vapors can cause irritation of the olfactory mucosa, altering the perception of more subtle aromas.
- **Using a poorly rinsed glass or one impregnated with residual odors** (dish soap, wine, cigar, etc.): these olfactory contaminants interfere with sensory analysis and can be confused with the aromas specific to whisky.
- **Tasting in an environment saturated with smells** (cooking, perfume, scented candles, smoke, etc.): ambient olfactory stimuli dominate perception and disrupt the retronasal pathway.

3.4. MOUTH POSTURE ERRORS

- **Do not circulate the whisky over the entire tongue and palate:** leaving the sip motionless in the center of the mouth reduces the stimulation of taste and trigeminal receptors, thus limiting the diversity and precision of aromatic perceptions.
- **Inhaling excessive air into the mouth:** too rapid aeration quickly volatilizes the ethanol, accentuates the tingling sensations and disrupts the balance of retro-olfaction.
- **Adopting a tense posture when swallowing:** excessive muscle tension makes swallowing less fluid, impairs the management of internal airflow and reduces the quality of the aromatic ascension.

3.5. SENSORY PREPARATION ERRORS

- **Not taking the time to smell the whisky before tasting it :** You lose an important reference point for comparing what retro-olfaction brings in addition.
- **Tasting with a blocked nose** (cold, severe allergy): the retronasal route doesn't work well; you'll mainly experience taste sensations (sweet, bitter, sour) but very few aromas.
- **Drinking something very fragrant just beforehand** (strong coffee, flavored drink, mint) will overpower or distort what is then perceived through retronasal -olfaction.

3.6. ERRORS IN ATTITUDE AND ATTENTION

- **Systematically seek out complex or rare aromas:** an excessive focus on sophisticated descriptors can induce unnecessary cognitive tension and divert attention from the dominant profiles (fruity, woody, spicy, smoky), which nevertheless constitute the fundamental aromatic structure.
- **Talking or becoming distracted at the key moment of retro-olfaction** (immediately after swallowing and during nasal exhalation) : Interruption of attention disrupts the observation of aromatic compounds rising through the retronasal route and reduces the quality of sensory analysis.

4. WHICH GLASS SHOULD I USE FOR A GOOD RETRO-OLFACTION?

The Glencairn glass is particularly well-suited to the analytical tasting of whisky. Its shape has been designed to promote the concentration and channeling of aromatic compounds towards the nose while maintaining optimal comfort during sipping and swallowing.

4.1. TULIP SHAPE AND DYNAMICS OF VOLATILE COMPOUNDS

Flared bowl: the wide lower part increases the contact surface between the liquid and the air. This configuration promotes oxygenation and the gradual volatilization of aromatic compounds (esters, aldehydes, phenols, etc.).

Narrow neck: the reduced diameter at the top concentrates aromatic vapors and directs them towards the entrance of the nostrils. This design improves both orthonasal (nasal) olfaction and retronasal olfaction after swallowing.

4.2. ADAPTATION TO FINE SENSORY ANALYSIS

Optimized conical profile: the Glencairn belongs to the family of so-called "nosing glasses". It is widely used by distilleries, blenders and sensory analysts for the detailed study of aromatic profiles.

Channeling of aromatic flows: the controlled concentration of vapors at the opening of the glass enhances the perception of dominant nuances (woody, fruity, spicy, smoky, peaty, etc.) and improves the precision of the retro-nasal phase.

4.3. ERGONOMICS AND THERMAL MANAGEMENT

Short, thick base : it allows for a stable grip while limiting heat transfer to the upper part of the glass. This reduces excessive evaporation of ethanol, preventing a premature dominance of alcoholic sensations.

Controlled drinking rim diameter : the sufficiently narrow opening promotes small, controlled sips, an essential condition for balanced and progressive retro-olfaction.

4.4. A STANDARD IN ANALYTICAL TASTING

Inspired by professional glasses such as **Copita** or **INAO**, the **Glencairn** has become **an international standard in the world of whisky**. It offers an effective compromise between analytical precision, ease of use, and aromatic stability.

5. CONCLUSION

Retro-olfaction represents the **sensory outcome of tasting**. It connects the gustatory analysis to the deeper aromatic perceptions by revealing, through the retronasal way, the full volatile spectrum of the whisky. Often more precise and structured than direct olfaction, it allows one to assess the coherence between the attack, development, and finish.

In the study of a whisky, **retro-olfaction confirms or nuances the initial impressions**, highlights the quality of the distillation, the influence of the **maturity warehouses**, and the **complexity of the wood aging**. It is thus an essential tool for appreciating the balance, length, and overall aromatic signature of an expression



AFTER SWALLOWING THE WHISKY ...

DON'T FORGET THE NASAL EXHALATION,

MOUTH CLOSED!!

Some references:

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