

THE AROMAS OF WOOD

Dryness, Resinous and Sappy Notes, Toast and Balsamic Notes
By Alexandre Schmitt (wineandflavors.com)

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Two Distinct Aroma Concepts

- Perception: It is subjective; as soon as the brain detects the smell it wants to understand what it is smelling; do you like it or not, do you hate it, do you know it, are you able to mention what it is, are you able to describe what you are smelling?
- Sensation: It is a physiological reflex of a human being. You don't even think of it. It's like breathing in your daily life.
- The first step is the sensation and perception is the second step.
- Perception is connected to your intimacy. If you don't know what you smell you are going to compare to what you have in mind, to all of your olfactory memories. It's a process of comparison. You have memories due to your education and life, where you've been born, where you've been raised, where you live. You've been exposed to many different smells. The sensation process is similar from one person to the other, but the perception is very subjective. We smell in the same way but we perceive in a different way.
- We have a need to talk about wine. If you want to speak about wine you need to structure your commands. In order to taste a wine you need to be able to talk about it. You want to express your experimentation of the wine even if our perception is very subjective.

We Have Two Types of Perception

- Analytical: The ability to communicate and describe the syncretic perception (Jasmin: flower like, white flower like, Jasmin like, celery bulb like); using rational, objective facets of flavors.
- Syncretic: The memory which comes to mind when you smell something (example: Jasmin)

Human Evolution

- 2 ½ million years ago we were more like dogs. We were using our nose right next to the floor, to the soil. We used our sense of smell for reproduction, to feed and protect ourselves. As soon as we stood up we changed to the sense of sight. Today, when we look for food we use our sense of sight.
- When our brain receives a smell we use 5 senses:
 - 65% - 70% are from our sense of sight
 - 20% - 30% are from our ears
 - 15% - 20% are from our sense of touch
 - 1% from sense of taste and sense of smell

Our Language

- We have around 1,000 words to describe our sense of sight.
- We only have four words to describe our sense of taste: sweet, acidic, bitter and salty (if you work hard you will find more, maybe a dozen).
- Many people don't have any words to describe the sense of smell. If we describe a wine with a citrus character and mention orange or lemon – in all your brains you have a picture of an orange and lemon because we are a visual animal. What are the aromatic facets of a lemon and an orange? What is the difference of these two citrus fruits? This description requires an olfactory knowledge. Goal of this seminar is to give the people an olfactory knowledge.
- We have two types of language to describe a wine:
 - Using aromatic descriptors (strawberry, lemon etc.) – this is not exactly what the wine is smelling; it's the image we get in our brain when we taste the wine (a lab cannot measure these descriptors)
 - Using aromatic molecules: chemical compounds that can be measured in a lab.



Interactive Evaluation of Woody Aromas

1st Aroma stick (Cedar wood)

People mentioned: cedar, eucalyptus, cigar box, pencil shavings, sandal wood, smoke, ashes, and mint

Everybody has a different image, because everybody has a different life.

We are smelling the same flavor, but the way we express ourselves is different. It's an example of subjective perception. The perception of smell is different from one person to the other and you bring different images.

At the same time you speak about two sensations/facets:

- Dry (dusty, woody, pencil shavings, cardboard, wet cardboard)
- Fresh (eucalyptus, raisin, aromatic herbs)

If you want to talk about dryness the best word is "woody." If you want to talk about freshness the best word is "pine resin." When we have a "woody" and "resin" character together it is "cedar."

Sandal wood is different: There is dryness but much less. There is warmth and fat (butter like) in the sandal wood character. It is woody, but slightly rancid, fat. There is something warm like nougat or hot milk. To speak about flavor without smelling it is education.

Sometimes winemakers mention "cedar wood" because of the astringency they get in the mouth. It's a sensation of the tongue, not from the nose. You will use sandal wood for dryness in Chardonnay. When winemakers do malolactic fermentation in Chardonnay, together with a toasted barrel, that can give you the sandal wood effect.

2nd Aroma stick (Pine resin)

People mentioned: pine resin, cat pee, white vinegar, ammoniac, chlorine, soap, rosemary, lavender, citrus and tea tree.

Sensations: freshness dominates with a hint of honey; extremely resin; pine tree

3rd Aroma stick (Tolu tree)

People mentioned: sweet, root beer, honey, something sweet, bee's wax, marshmallows, bubble gum, toffee, cinnamon, cough drops, spicy, warm, vanillin, clove, cardamom.

Sensations:

- Sweet, brown sugar, caramelized character, warm, syrupy, thick, round. We can perceive sweetness with the nose without tasting it. We perceive the same with bitterness and with acidity.
- Difference between red berries/fruit and black berries/fruit: red berries (for example raspberries) have more acidity, black fruit has more sweetness, they are more jammy.
- When you describe a wine you talk three dimensions: flavor, taste and the texture (for example: pear, mango or passion fruit have different textures. Passion fruit is driven by acidity and doesn't have the soft texture of a mango.
- Spicy: there are 2 ways to say a wine is spicy:
 - One is the burning you get from a wine (Syrah)
 - The other is the burning you get from a spice (it's a resin of a tree – Tolu tree)
- Balsamic character of a wine: warm, syrupy, thick, caramelized, round, cinnamon; toast characteristics belong to the balsamic family

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4th Aroma stick (Vanilla bean from Madagascar)

People mentioned: vanilla extract, molasses, cream soda, sandal wood, caramel, brown sugar, sweet, cigar, hot wax, toffee, white chocolate, woody, balsamic character, pipe tobacco

Don't mention white chocolate: it is sourced from the fat of the beans. It has some physical characteristics: it melts like regular chocolate at 34 degrees C. The temperature of a human is 37 degrees C. During the last 2 centuries people used white chocolate to make medicine (suppository) with white chocolate.

Sensations:

- Dryness, woody character, balsamic character because it is warm, sweet, thick, round. It's vanilla beans from Madagascar. You get a chocolate character, a cacao beans character, caramel, toffee. At the same time you get a dryness. Tobacco leaf character. These are all the facets you get from vanilla.

5th Aroma stick (Vanillin)

People mentioned: corn tortillas, Mexican vanilla, more dry than sweet, powdered sugar, not the heavy sweetness, marshmallows, carnation flower (the only flower with spiciness: clove), cake, plaster, cheap vanilla.

Sensation:

- Vanillin is much simpler than vanilla beans from Madagascar. It is one dimensional, one directional. There is not such a complexity. There is no warmth, thickness and the wide character of vanilla beans from Madagascar. It is more powdery, very soft. Like sugar almonds (Easter almonds). Vanillin is more almond like than vanilla beans.
- French oak brings more vanillin character than American oak. Oak has always vanillin and it has oak lactones (Cis and trans). In American oak you have 75% of cis oak lactone and 25% of trans oak lactone. In French oak you have 25% of cis oak lactone and 75% of trans oak lactone. The threshold of perception of cis oak lactone is five times lower than the threshold of perception of the trans oak lactone. That means in the American oak you have three times more cis oak lactone but at the same time you perceive this compound five times less concentrated. Oak lactone that brings a coconut character is the main character of American oak. In French oak you don't find so much cis oak lactone and the perception of trans oak lactone is five times higher. Therefore you receive more of the vanillin character than the coconut character. French oak brings a soft vanilla character (something sweet, balsamic and soft)
- In some wines you can get the vanilla bean character because of the toast.

6th Aroma stick (Maltol)

People mentioned: clove, sweet, warm, spicy, molasses, dentist like, hot, slightly caramelized, carnation flower, fruit roll up, marshmallow, sweet and ripe and jammy strawberry, caramelized sugar, cotton candy, crème brulee, butter scotch.

- Through toasting you get the maltol/eugenol character (clove). It doesn't belong to the woody, resin and balsamic character. It belongs to the spice family.
- Don't confuse the spiciness in wine when the alcohol is too high and not integrated (not balanced).

7th Aroma stick (Furaneol)

People mentioned: coffee beans, burned toast, cocoa beans, walnut, dryness, solvent character, glue, coca cola, dark chocolate

Sensation:

- If something smells burned there is a dryness in it. If something smells smoky there is fat in it (like the soot in the chimney). If you have a coffee character in a wine you have some kind of dryness, it's a plus. If you have a smoky character in a wine you have to deal with fatness – it's a flaw in the wine. If you smell walnut you have to deal with oxidation (Madeira wines etc.)

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Partnership with MASILVA

Alexandre's goal is to increase the efficiency in people and bring more precision in the way they work. Alexandre was surprised to see how winemakers evaluate corks.

- Some people use Vodka for the cork sensory evaluation. Even if it has positive aspects, he doesn't see a realistic situation for using Vodka. Vodka gives you results and conclusions that are not present in wine. With wine – white wine or red wine – you have a realistic situation. Aromatic compounds in Vodka solutions don't react the same in wine. There are some aromatic compounds that disappear in the wine while you would keep them in the Vodka. For example 2MIB compound (2-Methylisoborneol) – musty or earthy odor. If you smell it in Vodka it has a resin character, with a cooling aspect like eucalyptus, minty, menthol, camphor, some aromatic herbal tones. These compounds disappear in the wine after 10 minutes. It gives you a wrong understanding just because of a protocol you are using.