OLIVE OIL NEWSLETTER

BAKER WINE & GRAPE ANALYSIS

Great reads in this issue:

Smoke Taint in Olive Oil?

With the amount and scale of wildfires experienced all over the Western United States in 2020, there have been questions regarding smoke taint in olives and olive oil. Olives, like any crop, can be vulnerable to smoke impact depending on the severity of exposure. Unlike winegrapes, smoke impact on olives is not a hugely researched topic. **Thankfully, it seems as though olives fare much better than grapes in the presence of wildfire smoke.**

According to Dr. Selina Wang, research director at the UC Davis Olive Center, **olives are less susceptible than winegrapes to smoke taint thanks to thicker olive skins.** The protective cuticular wax, inability of ash solubility in oil, as well as the olive wash step in processing all play a beneficial role in minimizing opportunity for smoke taint in olives and olive oil.

The timing of fires in relation to the growing season impacts potential for smoke taint. If fires are early enough, the smoke compounds can break down before harvest and not transfer into oil. The length of time olives are exposed to smoke, as well as any rain events before harvest, can also make a difference. Variations in thickness of the waxy coating and amount of surface area due to varietal differences may also play a part in level of smoke influence.

How do smoke impacts express themselves sensorially? While impact often appears to be limited, the oil seems to have a higher astringency with increased puckering and drying sensation in the mouth.

A 2017 study at UC Davis found that oil from smoke tainted olive groves was free from defects, although shelf life was not studied. Anecdotal evidence from olive oils grown in fire-affected areas of California, Australia and Chile points to the same conclusion, albeit with a few rare reports of a smoky nuance in an oil.
Some olive oil producers have reported creating a flavored "smoked" oil by smoking affected oils with wood chips, which is not overpowering. As a flavored oil, however, it would not be certified as EVOO.

What about ash? If ash is visible on your harvested olives, it is advised to wash them judiciously to ensure complete ash removal prior to processing.


Photo ©The Associated Press

Leandro Ravetti, technical director at Boundary Bend Limited, Australia, suggests millers wash olives thoroughly, changing water regularly and providing a final fresh shower if possible; crush with slightly larger grids than you would normally use; and limit malaxation time to no more than 45 min to 1 hr at the lowest possible (but reasonable) temperature.

Olive Oil Sensory Evaluation

To be legally labeled extra virgin, an olive oil must pass both a **chemistry analysis panel** as well as a **sensory evaluation**. At Baker Wine & Grape, we test oils for the chemistry analysis portion. In California, both Applied Sensory in Fairfield, CA and the California Olive Oil Council (COOC) are recognized by the American Oil Chemists' Society (AOCS) for sensory olive oil tasting panels.

Here is a summary from the California Olive Oil Council (COOC) Tasting Panel, including how panelists taste and what they are tasting for, as found on the COOC website at: ***cooc.com/how-to-taste***:

THE COOC TASTING METHOD: The best way to discover an oil's flavor is to sip it "neat" - meaning on its own without bread or other food. This will allow you to savor the oil's flavor without distraction.

Professional tasters use specially-made blue glasses that are tapered to concentrate the oil's aroma; a wine glass is a good substitute when tasting at home. The blue color ensures that tasters aren't influenced by the color of the oil, which is not an indicator of quality or flavor profile. Cover the glass and allow it to gently warm in your hand; optimal tasting temperature 82°. It is important to evaluate the oil in an odor-free environment.

THE 4 'S'S: If tasting a series of oils, be prepared to clean your palate between tastes with a bite of green apple followed by either still or sparkling water.

1. **SWIRL** This releases the oil's aroma molecules. Keep the oil covered until ready to sniff.

2. **SNIFF** Uncover the oil and quickly inhale from the rim of the glass. Take note of the intensity and the description of the aroma.

3. **SLURP** Take a small sip of the oil while also "sipping" some air. This slurping action emulsifies the oil and helps to spread it throughout your mouth. Take note of the retro-nasal aroma as well as the intensity of bitterness.

4. **SWALLOW** An oil's pungency is judged by a sensation in your throat so you must swallow at least a small amount to thoroughly evaluate it. If the oil makes your throat scratchy or makes you want to cough, it is a pungent oil.

WHAT THEY'RE TASTING FOR:

ATTRIBUTES The sensory assessment of olive oil uses scientific methodology to evaluate the quality of an oil. Tasters are trained to recognize specific attributes, which are measured and then statistically analyzed to determine if the oil is free of negative attributes (flavor defects), or not.

FRUITY refers to the aroma of fresh, undamaged olive fruit in the oil, which is perceived through the nostrils as well as retro-nasally while oil is in the mouth.

BITTERNESS, which is a primary flavor component of fresh olives, is perceived through receptors (taste buds) on the tongue.

PUNGENCY is a biting tactile sensation noticed in one's throat. Sometimes oils are referred to as one or two "coughers" as this is a common response to pungency.

DESCRIPTORS Descriptive language that depicts the oil's aroma and flavor are subjective and therefore not scientific, yet these descriptors are helpful in differentiating extra virgin olive oils from one another. Descriptors play an important role when marketing oils to chefs & consumers.

DESCRIPTORS

GREEN FRUIT	RIPE FRUIT	OTHER
Artichoke	Buttery	Black Pepper
Cinnamon	Floral	Cherry
Eucalyptus	Nutty	Citrus
Grass	Ripe Apple	Hay-straw
Green Almond	Ripe Banana	Other Spices
Green Apple	Ripe Olive	Walnut Shell
Green Banana	Stone Fruit	Woody
Green Olive	Tropical	
Green Tea		
Herbaceous		
Mint		
Pine		
Tomato Leaf		

Total Polyphenols - Why do you want to know about them?

Polyphenols. You hear that word tossed about when we talk about healthy eating.

What exactly are polyphenols? Polyphenols are a large group of very big molecules found naturally in many foods. Polyphenols are powerful antioxidants, which as the name implies, means that they protect from oxidation. In the case of olive oil, a high polyphenol content protects against rancidity and contributes to a longer shelf life. High polyphenol olive oil is bitter and induces a cough or two. But numerous studies have shown that olive oil high in polyphenols provides antioxidant protection to those who consume them.

Here at BWGA, we measure polyphenols using a test that was developed in Florence, Italy, in the heart of the Italian olive region. This test measures the polyphenol antioxidative activity and is reported on a scale of 200 (low) to 600 (high) mg tyrosol/kg oil.

If you are interested in testing for polyphenols in your oil please bring a sample that is either filtered or racked after milling. Turbid oils interfere with testing for polyphenols. **Total Polyphenols = $80**

MOI? What is it?

MOI is an acronym for **Moisture and Volatiles**. This test **measures the amount of water and other volatile compounds, such as ethanol or acetic acid, if your olives were starting to ferment.**

Water in your oil is not desirable, as it can rapidly decrease your shelf life. There is always a small amount of water in your freshly milled olive oil. Fortunately, the water quickly separates from the oil, with the oil floating to the top, making it quite easy to rack your oil away from the water after settling for 1-2 weeks. Alternatively, freshly milled oil can be filtered to remove the water.

Do I need to test MOI for COOC Certification? The 2020 requirements have changed and producers under 5,000 gallons **do not** need to submit MOI for certification.

If you are interested in testing for MOI, please make sure your oil has been settled or filtered before bringing it in for analysis. **MOI = $33**

What Olive Oil Analyses are Available at BWGA?

Free Fatty Acids, Peroxide, UV & MOI	$100
FFA, Per, UV Pack: For producers of <5000 gal submitting to COOC. Includes Free Fatty Acids, Peroxide and UV Analysis	$80
Polyphenols	$80
Moisture and Volatiles	$33
Best Before Date	$80
Sample size: 100mL	

How Do I Ship Samples?

We are excited to announce that you are now able to **print a pre-paid shipping label for sending your olive oil samples to BWGA!** Log in to your BWGA account and look for the ***Shipping Label*** tab. You will be directed to enter your "ship from" information and then can simply print and attach the label to your packaged samples. The carrier is FedEx and you can drop your sample at any FedEx shipping location. Let us know if you need insulated mailers, sample containers or labels and we will be happy to send some to you.

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BWGA Hours

Monday - Friday: 8am - 6pm
Saturday: 10am - 4pm through November!
Sample drop-off at front door, as well as labels, sample bottles and tubes to take.

Field Trip

Thanks to **Kiler Ridge Olive Farm** in Paso Robles for a fun and informative field trip way back in January of this year!

We hope these photos get you excited for the end of this year's growing season and anxious to power up your mills again!