A QUICK REFERENCE GUIDE

Understanding Natural Wine

UNFILTERED

- Origins
- Farming
- Winemaking
- Flaws
- AVAs
- Grapes
- Glossary

What does natural mean?

There's no legal definition of natural wine in the U.S. In practice it means two things: grapes farmed without synthetic chemicals, and wine made with nothing added and nothing taken away.

- Organic or biodynamic farming
- Picked by hand
- Native yeast only
- No additives; at most a little sulfur
- Not fined or filtered

Why natural?

Most commercial wine is built for consistency, speed and scale, with synthetic sprays in the vineyard and a long list of cellar additives that never appear on the label. Natural wine is the alternative: wine that tastes of its grape, its place and its year; farming that rebuilds soil instead of depleting it; and a bottle that hides nothing. It's also a choice about who you support: your local, independent growers and winemakers.

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01 ORIGINS

A reaction to chemistry

After World War II, synthetic pesticides like DDT and a growing arsenal of cellar additives spread through European wine. In Beaujolais, chemist, biologist and wine merchant **Jules Chauvet** warned that this chemistry stripped wine of what makes it taste of its place.

A group of Morgon winemakers took up his ideas: **Marcel Lapierre, Jean Foillard, Jean-Paul Thévenet and Guy Breton**, the "Gang of Four" named by importer Kermit Lynch (with **Joseph Chamonard**, often counted as the fifth). They made wine with no chemical additives, no cultured yeast, no fining, no filtering and no added sulfur. Cellar notes marked these wines "0/0": *zéro-zéro*.

The idea spread through the Loire, to wine fairs like La Dive Bouteille and RAW, and to California, where **Paul Frey, Kevin Kelley, Steve Edmunds, Tony Coturri, Darek Trowbridge, Jared Brandt and Randall Grahm** led the way. After the 2008 crash, surplus grapes, winemakers looking for work and drinkers hunting for great wine at fair prices turned it into a movement.

Today, for a new generation of Bay Area winemakers, natural wine is protest art: proof that we can farm, make wine and build community on different principles.

Read the essay "Natural Wine as Protest Art" on Instagram: @unfilteredwinefestival

What's in your wine?

60+ **additives and processing aids U.S. law allows in wine. Only sulfites have to be on the label.**

Wine is regulated by the TTB, not the FDA, so unlike food it carries no ingredient list. A conventional bottle can be adjusted, colored, sweetened, flavored, clarified and stabilized, and you'd never know. A few of the usual suspects:

- **Cultured yeast & nutrients** to control fermentation
- **Tartaric & citric acid** to adjust acidity
- **Sugar & sweeteners** for a softer, rounder taste
- **Gum arabic** for a fuller mouthfeel
- **Copper sulfate** to strip sulfur smells
- **Enzymes** to pull color, speed clarifying
- **Grape concentrate** ("Mega Purple") for color and sweetness
- **Oak chips & tannin powder** for instant "barrel" flavor
- **Gelatin, isinglass, egg white, casein** animal products used for fining
- **Potassium sorbate & DMDC** to kill or stop yeast

The natural answer: grapes, and at most a little sulfur. Natural wine began as a reaction to exactly this list.

Many of the first additives for "industrial" wine came from the chemical makers that had supplied World War II. That's why pioneers like **Ridge** call their methods **"pre-industrial."** And the most expensive Burgundies in the world? Natural: farmed without synthetics and made with a very light hand.

How the vines are grown

Dry farming

No irrigation. Vines live on rainfall alone, so roots grow deep, yields drop and flavors concentrate. Not possible in very dry regions or with young vines.

Regenerative

Farming that rebuilds soil, stores carbon and brings back biodiversity: compost, cover crops, grazing sheep and chickens, hedgerows, and little or no tilling. Many natural winemakers see it as the gold standard.

Organic

No synthetic pesticides, herbicides or fertilizers. Weeds are pulled or plowed, not sprayed; sulfur and copper sprays are allowed. Plenty of vineyards farm organically without certification, which is costly and slow.

Natural winemakers reject synthetic inputs and put soil health, biodiversity and minimal intervention first.

Biodynamic: the farm as one organism

Created by Austrian philosopher Rudolf Steiner in a 1924 series of lectures to farmers, biodynamics goes beyond organic. It treats the vineyard as a closed loop where compost, animals, cover crops and wild plants feed one another, and nothing synthetic comes in.

The calendar

Planting, pruning, picking and even racking follow the moon and the planets, marked as root, flower, fruit and leaf days.

The preparations

The most famous, and most debated, part. Cow manure is packed into a cow horn, buried over winter, then stirred into water ("dynamized") and sprayed on the soil. Ground quartz in a horn, buried over summer, is sprayed on the leaves. Yarrow, chamomile, nettle, oak bark, dandelion and valerian are fermented, some inside animal organs (a stag's bladder, a cow's intestine, a skull), and added to the compost to wake up its microbial life.

Does it work?

Laugh if you like, but many believe the results speak for themselves. Some of our region's best wines come from biodynamic farms: Frey, Beckmen, Quivira, Porter Creek, Grgich, Preston and others. Demeter is the main certifier.

Sustainable

Balances environmental, social and economic needs, and allows limited synthetic inputs when they're a net positive. Advocates like Dr. Kaan Kurtural argue climate change calls for targeted irrigation, canopy work and mechanization.

Low intervention

A looser cousin of natural: careful farming and a light hand in the cellar, but some tools (a little sulfur, a light filtering, even cultured yeast) stay on the table. Where to draw the line is one of the liveliest debates in wine. Our panel *Natural vs. Conventional: Where Is the Line and Why Does It Matter?* took it on; watch it on Instagram @unfilteredwinefestival.

FOR CONTRAST

Conventional

Synthetic pesticides and herbicides, chemical fertilizers, irrigation to push yields, and monoculture for scale. The cost: compacted, depleted soil, polluted water, lost biodiversity and unsafe work for farmworkers.

03 WINEMAKING

From vine to bottle

Harvest

Winemakers pick for three things: **sugar** (measured in °Brix), **acidity** (lower pH means more acid and a wine that ages better) and **phenolic ripeness** (ripe tannins in skins and seeds; pick too early and they taste harsh and bitter).

The Brix math Alcohol ≈ 0.55 × °Brix. Grapes picked at 24° Brix make a wine of about 13.2%.

Most natural winemakers pick by hand, before sunrise. Cool grapes keep their acidity and aromas and resist browning, and hand picking leaves behind fruit that isn't ready.

Sorting & destemming

Leaves and damaged or unripe grapes come out. Stems are optional: some winemakers keep whole clusters for tannin and structure.

Crushing vs. pressing

Crushing breaks the skins so the juice (the "must") stays on its skins and seeds. Pressing separates juice from solids. Skin contact sets the style: none for white, hours for rosé, days to months for orange. Before efficient modern presses, long skin contact was the norm, which makes orange wine one of the oldest styles there is.

Native yeast

Wild yeast living on the grapes and in the cellar starts fermentation; no commercial yeast is added. Many see it as central to wine that tastes of its place, though it's still hotly debated in the industry.

Carbonic maceration

Whole, uncrushed clusters sealed in a tank of CO_2 ferment inside each berry. Low tannin, bright, juicy fruit: glou-glou in a glass.

Punchdowns & pumpovers

Pushing the floating cap of skins back into the juice to draw out color, tannin and flavor.

Malolactic

Bacteria turn sharp malic acid (green apple) into softer lactic acid (cream). The source of California's "buttery" Chardonnay.

Co-fermentation

Different grapes fermented together in one tank, not blended afterward.

Aging

- **Steel** keeps wine fresh, with little oxygen.
- **New oak** adds vanilla, spice and texture.
- **Neutral oak** breathes a little for a rounder feel, without oak flavor.
- **Concrete & clay** (amphora) are slightly porous and hold steady temperatures.

Bottling

Natural wines are racked off their sediment but rarely fined or filtered. Haze isn't a given, though: some natural winemakers take particular care to make clean, clear wines. Some go into bottle with nothing added at all ("zero-zero"); many get a touch of sulfur, or a little juice or sugar to make bubbles. Conventional wine may get any of the additives on page 4.

04 FLAWS

Is it the wine, or a flaw?

Flaw	Smells like	Cause	Verdict
Cork taint (TCA)	Wet cardboard, musty basement	A compound (TCA) from a contaminated cork	Fruit is muted. Send it back.
Mousiness	Rice cracker, Cheerios, hamster cage, only after you swallow	Bacteria or Brett in low-sulfur, high-pH wine	Usually ruins the wine.
Oxidation	Bruised apple, sherry, nuts	Too much air	Flat, faded, old before its time.
Volatile acidity (VA)	Vinegar, nail polish	Acetic acid from fermentation	A little adds lift; a lot burns.
Brett	Barnyard, leather, Band-Aid	Brettanomyces, a spoilage yeast	Rustic in small doses, fruit-killing in large.
Reduction	Struck match, rotten egg, rubber	Too little oxygen	Often blows off with air. If it stays, it's a flaw.
Refermentation	Surprise fizz, haze, yeasty	Leftover sugar meets live yeast	A flaw, unless it's a pét-nat.
Heat damage	Stewed fruit, prune, jam	Hot transport or storage	Tired and flat. Look for a seeping cork.
Lightstrike	Skunky, damp wool	UV light through clear or green glass	Hits delicate whites and sparkling.
Sulfur	Burnt match, stinging nose (SO_2); rotten egg (H_2S)	Too much sulfur, or reduction	Usually fades with decanting.

05 AVAS

Reading the label

An AVA (American Viticultural Area) is a legally defined growing region, like Russian River Valley or Howell Mountain. A place name on the label sets how much of the fruit must come from there:

100%	75%	85%
California	A county	An AVA

Napa

AVA	Soil	Key grapes	Climate
Calistoga	Volcanic, gravelly	Cabernet Sauvignon, Zinfandel, Syrah	Hot days, cool nights
Diamond Mountain District	Volcanic, rocky	Cabernet Sauvignon, Cabernet Franc, Merlot	Warm, tempered by elevation
Spring Mountain District	Volcanic, sedimentary	Cabernet Sauvignon, Merlot, Chardonnay	Cool, elevated
St. Helena	Alluvial, loam	Cabernet Sauvignon, Zinfandel, Merlot	Warmest valley floor
Rutherford	Gravel, sand, loam	Cabernet Sauvignon, Merlot, Sauvignon Blanc	Warm, sunny
Oakville	Gravel, clay loam	Cabernet Sauvignon, Merlot, Chardonnay	Warm, river influence
Yountville	Alluvial, loam	Cabernet Sauvignon, Merlot, Chardonnay	Cooler, foggy
Stags Leap District	Volcanic, river sediment	Cabernet Sauvignon, Merlot, Petite Sirah	Warm days, cool nights
Atlas Peak	Volcanic, red soils	Cabernet Sauvignon, Syrah, Chardonnay	Cool nights, elevated
Mount Veeder	Sedimentary, shale	Cabernet Sauvignon, Zinfandel, Merlot	Cool, slow ripening
Chiles Valley	Gravelly loam	Zinfandel, Cabernet Sauvignon, Chardonnay	High, cool
Coombsville	Volcanic ash, lava rock	Cabernet Sauvignon, Merlot, Chardonnay, Ribolla Gialla	Foggy, slow ripening
Oak Knoll District	Alluvial, clay loam	Chardonnay, Pinot Noir, Cabernet Sauvignon	Cool, marine
Wild Horse Valley	Volcanic, well-drained	Pinot Noir, Syrah, Chardonnay	Cool, breezy, elevated
Howell Mountain	Volcanic, rocky	Cabernet Sauvignon, Zinfandel, Petite Sirah	Above the fog, cool nights
Los Carneros (Napa & Sonoma)	Shallow clay	Chardonnay, Pinot Noir, sparkling	Cool, windy, marine

AVA	Soil	Key grapes	Climate
● Sonoma			
Russian River Valley	Goldridge sandy loam	Pinot Noir, Pinot Gris, Chardonnay, Zinfandel	Cool, foggy
Sonoma Coast	Loam, rocky	Pinot Noir, Chardonnay, Ribolla Gialla, Syrah	Cool, marine
Sonoma Valley	Alluvial, volcanic	Zinfandel, Cabernet Sauvignon, Chardonnay	Warm, with fog
Dry Creek Valley	Gravelly loam	Zinfandel, Sauvignon Blanc, Petite Sirah	Warm, coastal breezes
Alexander Valley	Gravelly, well-drained	Cabernet Sauvignon, Chardonnay, Merlot	Warm days, cool nights
Bennett Valley	Volcanic, clay loam	Syrah, Pinot Noir, Chardonnay	Cool, foggy
Knights Valley	Volcanic, sandy loam	Cabernet Sauvignon, Chardonnay, Merlot	Warmest in Sonoma
● Mendocino			
Anderson Valley	Alluvial, clay	Pinot Noir, Pinot Gris, Chardonnay, Riesling	Cool, foggy
Mendocino Ridge	Rocky, shallow	Ribolla Gialla, Zinfandel, Syrah, Pinot Noir	Above the fog
Potter Valley	Alluvial, silty loam	Chardonnay, Pinot Noir, Sauvignon Blanc, Muscat	Cool, big day-night swings
● Lake County			
High Valley	Volcanic, gravelly loam	Syrah, Petite Sirah, Cabernet Sauvignon, Zinfandel	High, big day-night swings
Red Hills	Volcanic, obsidian	Cabernet Sauvignon, Syrah, Petit Verdot	Warm days, cool nights, high UV
Big Valley District	Alluvial, clay loam	Sauvignon Blanc, Chardonnay	Cooler, breezy valley floor
Kelsey Bench	Volcanic, well-drained	Zinfandel, Chardonnay, Sauvignon Blanc	Moderate elevation, breezy
Guenoc Valley	Alluvial, clay loam	Cabernet Sauvignon, Merlot, Chardonnay	Warm, coastal influence

AVA	Soil	Key grapes	Climate
Central Coast			
Santa Cruz Mountains	Rocky, shale, loam	Pinot Noir, Cabernet Sauvignon, Chardonnay, Syrah	High, fog-cooled
Santa Lucia Highlands	Gravelly loam	Pinot Noir, Chardonnay, Syrah	Cool, windy
Arroyo Seco	Sandy loam	Chardonnay, Riesling, Grenache, Pinot Noir	Warm days, cool winds
Carmel Valley	Granite, shale	Cabernet Sauvignon, Merlot, Zinfandel	Warm, marine
Chalone	Limestone, granite	Chardonnay, Pinot Noir, Chenin Blanc, Grenache	Dry, elevated
Paso Robles	Calcareous shale, loam	Zinfandel, Syrah, Grenache, Mourvèdre, Counoise, Cinsault, Cabernet Sauvignon	Hot days, cool nights
Lodi & the Sierra Foothills			
Lodi	Alluvial, sandy loam	Zinfandel, Albariño, Tempranillo, Fiano, Greco, Falanghina, Cinsault, Muscat	Warm, Delta breezes
Sierra Foothills	Volcanic, granite	Grenache Blanc, Zinfandel, Syrah, Barbera, Grenache	Warm, cooled by elevation
El Dorado	Volcanic, granite, shale	Zinfandel, Barbera, Mondeuse, Grenache, Cabernet Pfeffer, Syrah, Mourvèdre, Counoise	High, cool nights
Fair Play	Granitic, sandy loam	Zinfandel, Barbera, Petite Sirah, Syrah	High, big day-night swings
Santa Barbara			
Santa Maria Valley	Sandy loam, marine sediment	Pinot Noir, Chardonnay, Syrah	Cool, foggy, long season
Sta. Rita Hills	Marine sediment, loam, sand	Pinot Noir, Pinot Gris, Chardonnay, Syrah	Very cool, foggy, windy
Ballard Canyon	Sandy clay loam	Syrah, Grenache, Sangiovese	Moderate, coastal breezes
Happy Canyon of Santa Barbara	Serpentine, loam, clay	Sauvignon Blanc, Cabernet Franc, Cabernet Sauvignon	Warmest, dry inland
Santa Barbara County	Marine sediment, sand	Pinot Noir, Chardonnay, Grenache Blanc, Grenache, Syrah, Albariño, Cinsault	Cool coastal, foggy

06 GRAPES

What's in the glass

Whites

Albariño
Citrus, peach, saline, floral; high acid

Arneis
Pear, almond, gentle bitterness

Chardonnay
Apple, pear, citrus; buttery or oaky by style

Chenin Blanc
Apple, honey, floral, mineral; dry to sweet

Clairette Blanche
Green apple, fennel, soft texture

Falanghina
Floral, apple, citrus, herbal

Fiano
Full body; hazelnut, honey, tropical fruit

Gewürztraminer
Lychee, rose, spice

Greco
Stone fruit, citrus peel, almond, mineral

Grenache Blanc
Green apple, stone fruit, fennel; waxy

Grüner Veltliner
White pepper, lime, herbs

Muscat
Orange blossom, peach, grape; perfumed

Picpoul
Lime, saline, razor-sharp acid

Pinot Gris
Pear, apple, almond; spicy when skin-fermented

Ribolla Gialla
Citrus peel, apricot, tea, nuts; grippy on skins

Riesling
Peach, apricot, floral; high acid

Sauvignon Blanc
Grassy, lime, green apple, tropical

Trousseau Gris
Stone fruit, floral, waxy

Vermentino
Lime, almond, saline

Viognier
Apricot, floral, oily texture

Reds

Barbera
Cherry, plum, blackberry, cocoa, spice

Cabernet Franc
Red currant, herbs, bell pepper; medium body

Cabernet Pfeffer
Spice, flowers, red fruit; medium body

Cabernet Sauvignon
Blackcurrant, cedar, green pepper; firm tannin

Carignan
Red fruit, earth, rustic

Cinsault
Red berries, floral, juicy; light tannin

Counoise
Bright red fruit, spice; high acid, low tannin

Grenache
Strawberry, raspberry, white pepper, earth

Merlot
Plum, black cherry, chocolate; soft tannin

Mondeuse
Dark berries, pepper, herbs; good acid

Mourvèdre
Dark berries, herbs, game; firm

Negroamaro
Dark cherry, earth; firm tannin

Petite Sirah
Blueberry, black pepper, chocolate; tannic

Pinot Noir
Cherry, raspberry, earth, spice; light body

Sangiovese
Cherry, plum, dried herbs; high acid

Syrah
Dark fruit, black pepper, leather, smoke

Tempranillo
Cherry, plum, tobacco, leather

Zinfandel
Jammy blackberry, pepper, spice

07 GLOSSARY

Speak natural

Zero-zero (0/0)
Nothing added, nothing taken away: no additives and no sulfur.

Orange wine
White grapes fermented on their skins. Also called skin-contact or amber wine.

Vin de soif
"Thirst wine": made for drinking now, not for the cellar.

Whole cluster
Fermenting grapes with their stems on.

Unfined, unfiltered
Not clarified, so the wine may look hazy. Harmless, and often a sign of a light touch.

Terroir
Soil, climate and place in the glass, and to many, the people and culture behind it.

Pét-nat
Short for *pétillant naturel*. Bottled before fermentation finishes, so the wine makes its own bubbles.

Glou-glou
French for "glug-glug": light, juicy, easy-drinking wine.

Piquette
A light, low-alcohol drink made by soaking pressed grape skins in water and fermenting again.

Lees
Spent yeast and other settled particles, like bits of grape skin. Aging on the lees (*sur lie*) adds texture.

Vigneron
A wine grower: someone who farms the grapes and makes the wine.

Natty
Slang for natural wine, usually the fun, funky end of it.

KEEP GOING

Instagram
@unfilteredwinefestival
Panel conversations, winemaker profiles, festival photos and upcoming events.

The map
California natural wineries
Natural and low-intervention wineries across the state, all on one map.

THE UNFILTERED MISSION

Change the wines we drink.

The Bay Area's independent winemakers make remarkable wine, yet most of it is missing from local restaurant lists, bottle shops and wine bars, even in the heart of America's Slow Food movement. Through a yearlong series of panels and tastings and an annual festival that is the largest gathering of independent wineries in Berkeley's history, UNFILTERED gives these producers the visibility they deserve and builds the demand that brings their wines to restaurants, shops and wine bars.

Here's how you can help

- **Ask for it.** Order local, independent wine at restaurants, bottle shops and wine bars.
- **Show up.** Come to the next UNFILTERED panel and the annual festival in Berkeley.
- **Go see them.** Visit the wineries on our map.
- **Follow along.** @unfilteredwinefestival

INSTAGRAM

WINERY MAP

UNFILTERED