Beginner's Wine Crafting Guide

Welcome to the wonderfully rewarding world of winemaking — where patience, sanitizing, science, and occasional optimistic guessing all come together to create something worth sharing.

This guide is designed to give Artisan Table Club members a practical overview of the major stages of wine kit crafting, what each step accomplishes, and what to expect along the way.

The good news:

You do not need to be a chemist, sommelier, or owner of a European vineyard to make excellent wine.

You do, however, need to sanitize consistently.

Seriously.

Step 1 – Fermentation

Fermentation is where winemaking officially comes alive.

This stage may be done using:

- A wide-mouth fermentor, or
- A food-grade white bucket

The choice often depends on the type and size of wine kit being produced.

During fermentation, yeast converts sugar into:

- Alcohol
- Carbon dioxide (CO_2)
- Flavor and aroma compounds that become your finished wine

In simpler terms:

> The yeast eats sugar and creates wine.

A surprisingly effective little workforce.

Why Fermentation Matters

This stage is responsible for:

- Creating alcohol
- Developing body and flavor
- Extracting character from juice concentrates and grape skins

- Beginning the clarification process
- Building the wine's aroma profile

Active fermentation usually appears as:

- Bubbling
- Foaming
- Hissing sounds
- Floating grape solids
- A room that suddenly smells like a winery instead of a storage room

All perfectly normal.

Important Additives During Fermentation

Bentonite

Bentonite is a natural clay added early in the process.

Purpose:

- Helps remove proteins and haze-causing particles
- Improves long-term clarity
- Helps produce a cleaner finished wine

Think of bentonite as the wine's cleanup crew.

Wood Chips, Spirals, Cubes & Oak Balls

These oak products simulate barrel aging.

Purpose:

- Add oak flavor and aroma
- Improve body and mouthfeel
- Introduce flavors such as:
    - Vanilla
    - Toast
    - Spice
    - Smoke
    - Caramel

Different kits use different oak formats depending on the wine style.

Airlock

An airlock is attached once the wine moves into a sealed fermentor or carboy.

Purpose:

- Allows CO_2 gas to escape safely
- Prevents outside air and contaminants from entering like wine gnats
- Protects the wine from oxidation and spoilage organisms

If the airlock bubbles during fermentation:

That's good.

If it sounds like a tiny coffee percolator:

Also good.

Sanitization – The Most Important Habit in Winemaking

Throughout every stage of winemaking:

Sanitize Everything That Touches the Wine

This includes:

- Buckets
- Carboys
- Spoons
- Siphons
- Tubing
- Corkers
- Bottles
- Hands
- Anything else that comes in contact with wine

Why?

Because yeast makes wine.

But bacteria makes vinegar.

Even small amounts of contamination can create:

- Off flavors
- Cloudiness
- Spoilage
- Oxidation
- Unpleasant aromas

Good sanitizing habits are one of the biggest differences between average wine and consistently excellent wine.

When in doubt:

> Sanitize it again.

Typical Fermentation Timeline

Primary fermentation usually lasts:

- Approximately 10–14 days

Factors that affect timing include:

- Room temperature
- Wine kit style
- Yeast activity
- Sugar levels

Do not rely solely on bubbling to determine when fermentation is complete.

The proper way to confirm progress is with a hydrometer.

Understanding the Hydrometer

A hydrometer measures the sugar level in wine.

Simple Explanation

- High sugar = higher hydrometer reading
- As yeast consumes sugar, the reading drops
- When readings stabilize near the target finishing range, fermentation is considered complete

Most kits begin around:

- 1.080–1.100 Specific Gravity (SG)

Most finished wines end around:

- 0.998–0.996 SG

Basic Reading Tips

- Fill the test tube with wine
- Float the hydrometer gently
- Read the number where the liquid crosses the scale

General Rule:

- Higher number = more sugar remaining
- Lower number = fermentation nearing completion

The hydrometer is essentially your wine's progress report.

Far more reliable than staring at bubbles and hoping for the best.

Step 2 – Racking the Wine, also known as Clearing

Racking means transferring wine from one container to another using a siphon.

Purpose of Racking

- Separates wine from sediment (lees)
- Improves clarity
- Reduces unwanted flavors
- Helps stabilize the wine
- Minimizes spoilage risks

Sediment naturally develops during fermentation and clarification.

This sediment contains:

- Spent yeast
- Grape solids
- Proteins
- Other particles

Leaving wine on heavy sediment too long may negatively affect flavor.

Typical Racking Schedule

Most wine kits involve:

- 2–4 rackings

Typical intervals are:

- Every 2–6 weeks depending on kit instructions and clarity

Common sequence:

1. Primary fermentation
2. First racking into carboy
3. Clearing/stabilizing stage
4. Additional racking if sediment continues forming
5. Bottling

Patience helps significantly during this stage.

Clear wine is usually better wine.

Sulphite & Sorbate Additions

These stabilizers are commonly added after fermentation is complete.

Potassium Metabisulphite (Sulphite)

Purpose:

- Protects wine from oxidation
- Helps prevent spoilage
- Inhibits unwanted bacteria and wild yeast

- Wine kits typically provide about 25 ppm (parts per million) as opposed to commercial which ranges from 75 to 100 ppm to protect during shipping, shelving in stores and eventual drinking

Sulphite may also be added:

- Before long-term aging in carboys
- Before bottling if wine is to be aged 1 yr or longer

Potassium Sorbate

Purpose:

- Prevents yeast from reproducing
- Helps prevent renewed fermentation in bottled wine

This is especially important for wines that contain residual sugar or sweetening packs.

Without sorbate:

A sweet wine can potentially restart fermentation inside the bottle.

Which creates pressure.

Which can create excitement.

Not the good kind.

Kieselsol & Chitosan

These two additives are commonly used together during the clearing and stabilizing stage.

They work as a fining system to help suspended particles settle out of the wine.

Kieselsol

Kieselsol is a silica-based fining agent.

Purpose:

- Helps attract and bind positively charged particles
- Begins the clarification process
- Assists in pulling haze-forming material out of suspension

Kieselsol is typically added first.

Think of it as the first half of a “magnet system” that starts gathering floating particles together.

Chitosan

Chitosan is a natural fining agent derived from shellfish shells.

Purpose:

- Binds with remaining suspended particles

- Helps compact sediment at the bottom of the carboy
- Improves clarity and polish of the finished wine

Chitosan is usually added after kieselsol.

Together, the two products help:

- Clear wine faster
- Improve brilliance and appearance
- Reduce the amount of sediment that reaches the bottle

During this stage, you may notice:

- The wine becoming noticeably brighter
- Sediment collecting on the bottom of the carboy
- The wine changing from cloudy to clear over several days or weeks

This is exactly what should happen.

Patience is important here.

A wine that looks crystal clear in the bottle almost always feels more professional and enjoyable to serve.

Clearing & Aging

After stabilization, the wine begins clearing.

During this stage:

- Suspended particles settle out
- Flavors soften and integrate
- Harshness decreases
- Wine becomes smoother and clearer

Typical Clearing Time

- 2–8 weeks depending on:
    - Wine type
    - Temperature
    - Additives
    - Patience level of the winemaker

Many wines improve dramatically with additional aging.

Even when the wine is technically “ready,” giving it extra time often rewards you with:

- Better balance
- Improved aroma
- Smoother finish

Step 3 – Bottling

Once the wine is:

- Fully fermented
- Stable
- Clear
- Properly aged

…it is ready for bottling.

Bottling Process

Before Bottling

- Sanitize bottles thoroughly
- Sanitize siphons and bottling equipment
- Sanitize corks & Inspect corks and bottles for cleanliness

Filling Bottles

- Use a bottling siphon with filler wand
- Fill consistently to proper bottle height
- Avoid excessive splashing to minimize oxygen exposure

Corking

- Insert corks using a corking machine
- Allow bottles to stand upright for 1–3 days before laying them down

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Labels, Capsules & Final Presentation

Now comes the rewarding part:

Making your wine look as good as it tastes.

Labels

Labels commonly include:

- Wine name
- Vintage year
- Bottling date
- Winemaker name
- Purchase when you buy your kit or make them yourself!

Capsules

Capsules:

- Cover the cork and bottle top
- Improve presentation

- Add a finished professional appearance

Sparkling Wines

Sparkling or bubbly wines under pressure require:

- Wire cages
- Pressure-rated bottles

Regular wine bottles should never be used for pressured sparkling wines.

Final Thoughts

Great winemaking is usually not about perfection.

It is about:

- Clean equipment
- Consistency
- Patience
- Careful handling
- Learning from each batch

Every experienced winemaker has had:

- A batch that cleared beautifully
- A batch that took forever
- A siphon accident
- A forgotten airlock
- A cork that launched unexpectedly across the room

It’s all part of the process.

Enjoy the experience, ask questions, share ideas, and most importantly:

Enjoy the wine you created.

Welcome to the Artisan Table Club — and happy crafting!