



Usage Guide

Best Practices for Using Hopzoil

READ THIS FIRST!

Think of Hopzoil® as Liquid Dry Hopping...



Determining ideal dosing rates for Hopzoil involves many factors, including the malt, yeast, water and any adjunct formulations that can impact your recipes, so we always recommend multiple small tests first. Below are the general dosing recommendations for our water-soluble Hopzoil formats. Adjust your dosing rate depending on whether you are looking for a top note, or more if you are diving into a hop-forward beer or other beverage.

With proper bench testing, you have the ability to match the sensory profile of an existing production beer, use Hopzoil to increase Yield by reducing pellets (partial or full replacement) **or develop a desired sensory profile for a new beer, NA beer, hop water, seltzer, cider or any other beverage.** Contact us for Non-beer Usage Guidelines.

BENCH TESTING RECOMMENDATIONS: Shorten up your R&D time with Hopzoil



When formulating a new recipe with Hopzoil, we suggest starting with an existing base beer such as a pale ale, lager, or base IPA. By testing varieties and blends in small quantities until you hit the sensory profile you are looking for, you can exponentially speed up your R&D by weeks or even months.

- We recommend getting an initial general sensory profile by using a toothpick dipped in various Hopzoil varieties and blends (approx. 4 oz pour or 100 ml of beer/beverage).
- Start with a palate check of the base beer/beverage. Whatever you use for your initial sensory test, smell and taste it first **BEFORE** you add any Hopzoil. You need a control against variable to determine the changes you are about to make.
- Make sure your toothpick is dipped in water-soluble Hopzoil and is only wet...not dripping. Stir it in the small amount of beer/beverage and wait at least a minute before you check aroma and taste. It will continue to “bloom”. Check sensory again after about 5 minutes and 30 minutes, it will continue to change.
- When you have settled on a general sensory profile with a desired variety/blend, then refine your dosing rates as outlined in the “TESTING SMALL” GUIDELINES on the next page.

Need Technical Support?

Call us:
406.862.HOPS (4677)

Email us:
info@glacierhopsranch.com

We are here to help!

PRO TIPS for using Hopzoil



Remember, there are **no bittering compounds** in Hopzoil. It is for Aroma/Flavor only. Think of using it as “liquid dry-hopping” in hop-forward beers. It works excellent as just a Top-Note only (with much lower dosage rates).

- Remember to always dose Hopzoil **on the cold side** or when you would normally do your dry-hopping addition. Dosing it on the hot side can cause some of the volatile oils (containing the aromas that you are trying to add) to flash off.
- Most brewers **dose it via in-line transfer** from the fermentation tank to the Brite Tank. Add your total dosage to some beer/beverage and agitate it. If you have a dosing chamber or similar method for adding it inline, it is best to push it in with some CO2. Mixing/agitation through the process is important to put the Hopzoil into suspension. For other options (including using a Unitank), contact us for Technical Support. There are other proven, easy ways to dose it.
- Alternately, you can **dose DIRECTLY into your conditioning vessel/Brite Tank**. Recirculate and/or agitate via carbonation before packaging. Agitation/blending is the key.

Hopzoil Formats, Best Applications and Clean Up



The **two water-soluble formats** for beer/beverages are **MAJIK** (clear in beverage) and **HAZY** (for intentionally turbid beverages, like a HAZY IPA). Both water-soluble formats are highly concentrated, but you need about 20% more HAZY to equal the sensory profile of MAJIK. **Clean-up is easy.** Most use plain water and sometimes a mild detergent to clean up any utensils or vessels.

SHELF LIFE: MAJIK has been tested to retain sensory profile *up to 270 days* in beer. HAZY has been tested to retain turbidity in suspension *up to 240 days, while maintaining the same sensory profile*. Further shelf life testing of either was not deemed necessary.

Calculating your Yield Gain



As a general rule, for every pound of hop pellets used in dry-hopping (400 grams), **brewers report losing an average of 6.8% and 7.5% of the total yield**. By even reducing hop pellets by a portion, you can gain considerable yields, recovering otherwise lost beer and **generate significant additional profit per batch**. To help you calculate your Yield Gain, contact us for a Costing Worksheet review, using your numbers.

Rule-of-Thumb Dosing Rates and Other Guidelines:



We provide Rule-of-Thumb dosing rates only as a starting point. Your actual dosing rate will be determined based on your desired sensory profile. It is easy to over-dose, as Hopzoil is HIGHLY CONCENTRATED, so initial small volume tests are recommended, as outlined below.

These recommendations are based on Imperial beer/beverage volumes: BBL=31 gallons. (*METRIC: Hectoliter is .85 of a BBL*). Dosing rates are based on replacing a volume of pellets during dry hopping. We suggest that regardless of your dosing rate, you can start with a 50% pellet reduction and increase it as you become comfortable with using Hopzoil. An 85% reduction seems to be a “sweet spot” for some brewers.

You will modify your calculations based on the actual volume of pellets replaced and increase or decrease your actual dosing rates accordingly, after you have tested small batches.

You will likely find that the dosing rate for a FULL hop pellet replacement is more than a PARTIAL hop replacement. Bench testing is recommended to dial in your actual rate.

Starting Point: we suggest fine-tuning your dosage rates using these “Testing Small” guidelines to achieve your desired Sensory Profile. Some Hopzoil varieties and blends can change dramatically with increased dosage rates. You may increase (or decrease) the final dosing rate from these Rule-of-Thumb rates. Always test your dosing rates in small quantity, BEFORE going into larger production.

“TESTING SMALL” GUIDELINES: We recommend starting with multiple one-liter measures of prepared beer/beverage and using a micro-pipette to micro-measure dosing rates per liter of beer/beverage.

- *As a quick guide, a 5 mL dosing rate per BBL equals about 460 µl per liter. We recommend going up (or down) in increments of 5-10% until you find your desired sensory profile. Do the math for extrapolating dosage per BBL or HL, and per Batch.*

When to Carbonate? Best Practice is to **carbonate AFTER dosing**, for ideal head retention. There are some exceptions to this, but as a general guideline, you will experience best results by following this recommendation.

SENSORY BLOOM: Due to the technology used to emulsify the oil, the flavor tends to bloom for up to 24 hours (even after packaging). The flavor may become more robust depending on your beverage. Approx. 90% of the flavor blooms occurs in first hour or so. Remember, you can always add more!

Dosing Process Recommendation



Dosing can be done IN-LINE between the fermentation tank and Brite tank OR DIRECTLY into your conditioning vessel/brite tank. Agitate via recirculation and carbonation before packaging. **Easy video instructions on Sanitary Dosing of Hopzoil can be found on YouTube:**

<https://www.youtube.com/watch?v=noAVcuXyr8E&t=7s>

Examples of actual dosing & pellet substitution rates						
Brewery	Original Pellets used (Lbs / BBL)	Pellet Replacement	Full or Partial Pellet Replacement	Actual Pellets (Lbs / BBL)	MAJIK mL dosage / BBL	Increased Yield / Batch
#1	3.7 lbs	55%	Partial	1.65 lbs	5 mL	14.0%
#2	4 lbs	50%	Partial	2 lbs	5 mL	15.0%
#3	2.5 lbs	50%	Partial	1.5 lbs	4.25 mL	6.8%
#4	2.5 lbs	100%	Full	0	10 mL	18.7%
#5	1.75 lbs	100%	Full	0	5 mL	13%
#6	1.3 lbs	100%	Full	0	6 mL	9%
#7	3.1 lbs	50%	Partial	1.55 lbs	8 mL	10%
#8	2.5 lbs	50%	Partial	1.25 lbs	5 mL	10%

Top Note Examples			
Brewery	Beer Style	Hopzoil/ BBL	Hopzoil/ HL
#1	Lager	0.83 mL	0.7 mL
#2	Lager	0.47 mL	0.4 mL
#3	Pilsner	1.5 mL	1.27 mL

Any Questions? Reach out to a Glacier Hops Ranch representative today. 406.862.HOPS (4677) info@glacierhopsranch.com • www.glacierhopsranch.com • www.hopzoil.com