



## PARTIAL MASH ALE BREWING INSTRUCTIONS

### GOSE ADVANCED KETTLE SOUR BREWING

**These are our recommended kettle souring instructions. If you have never brewed a kettle sour beer, please read all instructions before you begin. The brewing process will take at least 24-72 hours minimum before starting your boil.**

Brewing partial mash recipes can be accomplished using many different methods. These instructions describe one of these methods. You will need the follow equipment:

- One of our Beer Equipment Start Kits
- 5 Gallon Boil Pot
- 48-50 Beer Bottles
- Bottle Caps
- Muslin Grain Bag
- All Ingredients for a Beer Recipe

#### STEP 1: CLEAN AND SANITIZE

Clean & sanitize all equipment using products such as One Step, Iodophor, & Star San. Use according to manufacture directions.

#### STEP 2: STEEPING THE GRAIN

Heat 3 gallons of water to 155°F. Place the grains in a muslin grain bag (or reusable nylon bag) and steep in the hot water for 60 minutes. Occasionally dunk the grain in and out of the water or stir the grains inside the mesh bag so that the grains remain an oatmeal-like consistency.

Lift the bag of grain from the pot and strain 4 cups of warm water through the grains and into the pot until the bag stops dripping. Do not squeeze the bag. The purpose of rinsing the grains is to rinse off and collect any sugars that remain trapped in the bag with the grain. Discard the grains.

#### STEP 3: BOIL #1

Bring the sugary liquid (also known as "wort") to a boil. Occasionally stir to prevent the wort from boiling over. Once the wort is boiling, stir in any malt extract or additional sugars included in your kit (do not mix in priming sugar). Be careful not to burn any sugars on the bottom of the pot. Boil for about 5-10 minutes in order to sanitize the wort.

#### STEP 4: KETTLE SOUR

After the boil, you need to quickly cool your wort to between 75° F to 100° F. Popular ways to chill your wort include placing smaller pots in ice baths or using submersion style wort chillers. Open the packet of lactobacillus and pitch directly into the kettle. The wort will need to stay above 75° in the kettle for 24 to 72 hours while the wort sours. You can occasionally taste the wort to see if the desired sourness has been achieved. Once the desired sourness level has been achieved, bring the wort to a boil.

**Hop Additions:** Begin adding hops according to the schedule listed in your kit recipe instructions.

After the boil, quickly chill your wort to under 80° F. Once the wort has cooled, pour the wort into a sanitized primary fermenter (commonly a 6.5 gallon or 7.9 gallon plastic bucket). Next, add clean water to the wort in the fermenter until you have a total volume of 5.25 gallons. If you have a hydrometer, you can check the original gravity (OG) and write it down.

#### STEP 5: FERMENTATION

**Primary Fermentation:** Stir well to aerate the wort before pitching your yeast. If you have wet yeast, open the packages with sanitized scissors and pour on top of the wort. If you have dry yeast, sprinkle the yeast around the top of the wort.

Put the lid on the fermenter with an airlock installed. Fill the airlock to the fill line with water. After 12-36 hours, CO2 will begin to bubble up through the airlock. After 5-7 days, the bubbling in the airlock will begin to slow and a thick "yeast cake" will form at the bottom of the fermenter.

**Secondary Fermentation:** After 5-7 days, use a sanitized auto-siphon to siphon the beer to the sanitized secondary fermenter (usually a 5 or 6 gallon glass or plastic carboy). Be careful to only transfer the beer while leaving as much of yeast cake and sediment at the bottom of the primary fermenter behind. Put a sanitized drilled stopper into the top of your carboy. Seal the stopper hole with an airlock and fill the airlock with water up to the fill line.

#### STEP 7: BOTTLING

After secondary fermentation, there should be no more bubbling in the airlock. If there is still bubbling, wait an additional 2 days before you bottle. If you have a hydrometer, take a gravity reading to verify that you have reached your final gravity (FG). Write down the final gravity. To calculate the actual alcohol content of the beer, subtract the FG from the OG and then multiply by 131.

Pour 2 cups of water in a sauce pan and bring to a boil. Add 4-5 ounce of priming sugar to the sauce pan and boil for a minute. Let the solution cool for a few minutes.

Next, pour the sugary solution into the plastic bucket (primary fermenter), and then siphon the beer from the secondary fermenter into the bucket so the sugary mixture can mix thoroughly with your beer. Be careful to not disturb the sediment on the bottom of the secondary fermenter.

Once the beer is in the bucket, place the bucket on a counter top. Attach the bottle filler to the end of the tubing. Siphon the beer while using the bottle filler to fill each beer bottle. When you remove the filler, the level of beer will be appropriate for capping. Cap each bottle and store in a dark place at room temperature. You can move your beer to the refrigerator after the beer carbonates (typically 7-10 days).