

NGSC Master Distillers Fermentation Kit

Ingredients:

Cracked Corn

Malted Barley (recipe specific)

Malted Rye (recipe specific)

Malted Wheat (recipe specific)

Dextrose Corn Sugar (optional if added)

STILL SPIRITS Whiskey Distillers Yeast/ Nutrient

FERMFAST Glucoamylase Enzyme 10 grams

ONE STEP Brewing Sanitizer

7 Gallons Spring Water (not included)

Items you will need to make your mash:

- 10 Gallon Stock pot. Or 2 large pots
- Mill grinder or a kitchen blender
- Cooking thermometer
- Big kitchen spoon
- Two NGSC 7 Gallon Fermentation Buckets with vapor lock bubbler
- Large Kitchen strainer
- Cheese Cloth
- One ½ Gallon size mason jar or similar type (to create your yeast starter)
- BIG wide mouth funnel, sold by NGSC
- 2 tablespoons of sugar

Items that will make this process easier but not required:

- 10 Gallon Stock Pot
- Course strainer bags (12x19), NGSC Sells these
- Hull Crusher Mill Grinder, NGSC Sells these

Directions:

One Step brewing sanitizer (mix with 1 gallon of warm water until it dissolves)

Sanitize everything that will come in contact with your mash.

1. Put 5 gallons of water into a 10 Gallon Stock Pot. Bring to 200 degrees then turn off the heat.
2. Put the cracked corn in the 10 Gallon Stock Pot, and let it sit with the lid on until the temperature drops to 145 degrees, stirring every 5-10 minutes. *If you have a course strainer bag, put the corn into the strainer bag, tie up the top of the bag, and put into the hot water.* (the key here is to get all your hot water to sit with the cracked corn in it to steep out the corn starches)
3. Take your malted grains and place in a blender or mill grinder to crack open the kernels. *If you have a course strainer bag, put the milled grains into the strainer bags and tie up the top of the bag.*
4. When your corn mash has reached 145 degrees add the malted grains and packet of glucoamylase enzyme to the large pot with the corn mash. Carefully mix the mash with a large spoon. Put the lid back on the large pot, let it sit for 60 minutes, stir every 15 minutes. At this point all your grain starch should be converted into fermentable sugars.
5. Carefully pour the mash liquid through your kitchen strainer into the large bucket. Make sure you strain out all the grain solids from getting into the bucket. Pour the 2 additional gallons of water into the pot with the grain in it. Stir it around so the water can wash off all remaining grain sugars and starches, pour the liquid through your kitchen strainer into your fermentation bucket with the other 5 gallons. You can now discard the grain; it is no longer needed.
6. (optional) Add your Dextrose Corn Sugar to the mash liquid and mix it until all the sugar dissolves. Place the lid back on the bucket.
7. Wait until the mash liquid has cooled down to 80-90 degrees.
8. Create a simple yeast starter for your mash.
9. Add 1 quart of 90 degree water to a sanitized ½ gallon Mason jar.
10. Add 2 tablespoons of sugar to the water and mix thoroughly.
11. Add the yeast packet to the sugar water.
12. Put the lid on & swirl the glass to mix in the yeast packet with the sugar water.
13. Let the glass sit for 10 minutes, this will activate the yeast.

14. Once your yeast starter has activated, add it to your mash and aerate. Transfer it back and forth in 7-gallon buckets to mix and aerate well (8-10 times), it should look foamy.
15. Leave the wash in a 7 Gallon Fermentation Bucket, place the lid on it, and put a double bubble release valve at the top to allow gases to escape as the yeast does its job.
16. Allow to sit in a dark area, 75-80 degrees is the optimal temperature for this.
17. Wait 7-14 days for the fermentation process, it will stop actively bubbling around day 4-5, let it continue to sit for up to 14 days fermenting. You are looking for the yeast to create 4-6% ABV (alcohol by volume) in your mash. If you added the additional 5 lbs. of dextrose corn sugar then your ABV should be between 8-10% ABV.

Straining:

- 1 Place cheese cloth folded over 4 times in your strainer. Pour your mash liquid slowly through the cloth into the other bucket. Discard anything that gets caught.
- 2 Your liquid is ready to transfer into the still pot. A big funnel is ideal to pour it into the still.

Heating:

1. Number 1 rule to follow in heating up your pot is, “**low and slow is best**”.
2. If you are heating your still with a propane burner, we recommend elevating the still 6-8 inches above the burner. *See our website under the resource/ set up tab for great step by step photos on how to set this up properly.* You **DO NOT** want flames to come into direct contact with the bottom of your still. You want the heat from the flames to be what is heating your still, not the actual flames. We suggest building a cinder block base around your propane burner to create a sturdy base. Then use 3 sticks of angle iron (found at Home Depot) to create a platform across the burner.
3. Make sure you have cold water running in the worm condenser as the pot warms up, this is where the alcohol vapor becomes a liquid as it runs through the condenser coils in the cold water.
4. Our experience indicates it usually takes the still pot to warm up to just around 198-200 degrees before we see any shine dripping out of the worm.

5. This recipe will make around ½ to ¾ of a gallon of distilled spirits. We suggest you catch all your shine in 1 pint mason jars. You will need about 8 jars. Learning to properly make cuts is easier to learn when you use smaller collection jars in the beginning until you learn to “read the run”. This is best done by your sense of smell and taste. At the end of the first pint collected start tasting a couple drops as it comes off the still. Heads come off first and smell and taste like cleaning solvent. The hearts are sweet and smooth. The transition between the two is a slow gradual fade, not immediately. So, it helps out to know where you are in the run by tasting it every 5-10 minutes. Just a drop is all you need to smell and taste it. Any more than that and you won’t remember your name by the time you are done. The hearts of the run will blend out between 120-130 proof. How slow you run the still will determine the final proof. **Only put 5 gallons of wash in a NGSC 5 gallon still. Put 1-2 inches MAX of wash in the thumper to charge it.**
- a. First 2 ounces discard, this is the “foreshots”, not good for drinking.
 - b. The next 25-30% of total collected will be the “heads” of the run. It will taste like cleaning solvent. It will give you a hangover if you drink it.
 - c. The middle 40-50% of the total collected will be your “hearts” of the run, this is the drinkin stuff. It will taste sweet and smooth.
 - d. Last 25-30% of the total collected are your “tails” of the run. Typically, you will know you are in the tails when the distillate becomes slightly cloudy and an oily sheen can be seen on top of the liquid.

