

NGSC Master Distillers Fermentation Kit

Ingredients:

Corn (recipe specific)

Malted Barley (recipe specific)

Malted Rye (recipe specific)

Malted Wheat (recipe specific)

Dextrose Corn Sugar (optional if added)

STILL SPIRITS Whiskey Distillers Yeast/ Nutrient (4"x6" clear packet)

10 ml. High Temp Alpha Amylase (WHITE cap bottle)

5 ml. Glucoamylase (BLACK cap bottle)

1 packet One Step Sanitizer (clear packet)

5.5 Gallons Spring Water (not included)

Items you will need to make your mash:

- 1 large pot (big enough to hold 3 gallons of water)
- Kitchen blender, or a mill grinder
- Cooking thermometer
- Big kitchen spoon
- NGSC 7 Gallon Fermentation Bucket with vapor lock bubbler
- Large Kitchen strainer
- Cheese Cloth
- One Quart size mason jar or similar type (to create your yeast starter)
- Funnel

Items that will make this process easier but not required:

- Hull Crusher Mill Grinder
- Cordless or Electric drill with paint mixer attachment, to stir mash mixture

Directions:

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

Sanitize everything that comes in contact with your mash.

1. Place 3 gallons of water in a pot and heat it to a boil.
2. Carefully transfer the 3 gallons of water into your fermentation bucket.
3. If you have whole corn you need to mill it.
4. Put the milled corn in the fermentation bucket with the hot water.
5. Take a temperature reading to ensure the mash is 190 degrees or cooler.
6. Add the high temperature alpha amylase (WHITE cap bottle), stir for 30 seconds and cover with the lid.
7. Take your cereal grains and place them in a blender or mill grinder to crack open the kernels. Add them to the corn mash and stir.
8. Let it sit with the lid on for 90 minutes, stir every 5-10 minutes.
9. Pour the additional 2.5 gallons of water into the bucket with the mash.
10. When the mash has cooled to 110 degrees add the glucoamylase (BLACK cap bottle) and stir. Cover and stir every 5-10 minutes for an additional 30 minutes.
11. **(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.
12. Wait until the mash liquid has cooled down below 95 degrees.
13. Check your SG with a triple scale hydrometer. Reading should be between 1.065 & 1.070 for mash with only the grain sugars. If you add an additional 5 lbs. of dextrose sugar it should be around 1.080- 1.090.
14. Create a simple yeast starter for your mash.
 - a. Add 2 cups of 95-degree water to a sanitized jar.
 - b. Add 2 tsp. sugar to the water and mix thoroughly.
 - c. Add Whiskey Distillers Yeast Packet to the sugar water.
 - d. Swirl the glass to mix in the yeast with sugar water.
 - e. Let the glass sit for 10 minutes, this will activate the yeast.
15. Once your yeast starter has activated, add it to your mash and aerate. Thoroughly mix and aerate, it should look foamy on top.
16. Leave the mash 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.
17. Allow it to sit in a climate-controlled area, 80-90 degrees is the optimal temperature for this.

18. 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 7-8% ABV (alcohol by volume) in your mash. If you added the additional 5 lbs. of dextrose corn sugar, your ABV should be between 9-10%.

Straining:

- 1 Place cheese cloth folded over 4 times in your strainer. Siphon off the top of the liquid through the cloth into your still or the other bucket. Discard anything that gets caught in the cheese cloth. Be careful not to disturb the yeast bed at the bottom of the bucket.
- 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 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 slowly you run the still will determine the final proof.

6. **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. Some shiners collect up this to around 40-50 proof and save it for the next run. It can be used to charge the thumper or added back into the next batch when distilling.