

Batch Size: 5 Gallons

# Tchoup's Nitro-Powered Stout



## General Info:

OG: 1.053  
FG: 1.015  
SRM: 30.4  
IBU: 22.1  
ABV: 5.2%  
Steep Temp: 160°  
Steep Time: 60 min  
Boil Time: 45 min  
Primary Ferm Temp: 66-70°

## KIT RECIPE:

6 lbs. Dark DME  
1 lbs. Roasted Barley

## Hop Additions:

- 2 oz Hallertau Mittelfruh (45 min)
- 3 tbsp Gypsum (45 min)
- ½ Whirlflock Tab (10 min)

## Recommended Yeast

- WLP Yeast - 004 Irish Ale

## NOT INCLUDED BUT REQUIRED:

- Sanitizer
- Hops bag
- Priming sugar (dextrose)
- Bottling Caps

## *Brew Day:*

Remove yeast from the refrigerator prior to using to give it time to reach room temperature. Do not expose yeast to temps higher than 80°.

### 1. Boil

Heat 2-gallons of water to the Steep Temp, add the grains and cover for the Steep Time (the water temp will drop 10-15 degrees quickly and continue drop—this is ok). While steeping, if you have another pot, bring 3 gallons of water to a boil. Turn off the flame, add the Dry Malt Extract and stir until completely dissolved to avoid scorching (including any powder on the sides of the pot). If no other pot is available, finish the steep. Take out the grains and, while holding the bag over the pot, run a small amount of cold tap water over the bag to rinse out any additional sugars. Do NOT squeeze the grain bag. Return the pot to the heat source and bring to a boil. Once boil is reached turn off the heat and add the Dry Malt Extract. Stir until completely dissolved to avoid scorching. The liquid in the pot is now called Wort. Turn the heat on and bring back to a boil. The wort will foam quite a bit when it first reaches boil and with the first hop addition. Adjust the burner to prevent boil overs. Tip: Never let the grain steeping water temperature exceed 170°F, which will extract tannins that are not desirable.

### Boil Additions:

Once the wort has begun to boil, start your timer to count down the Boil Time. Additions to the brew process are calculated by the time remaining on the Boil Time. Add the additions through the boil count down as indicated on the recipe. Early hop additions are called bittering hops and latter additions add aroma and flavor. You may find it easier to add the hops in a separate mesh bag to make removing them easy at the end of the boil, if not you will have to strain the hops out of the wort. The whirlfloc tab gets dropped right into the boiling pot, this helps to reduce haze-causing proteins.

Once the wort stops boiling everything that comes into contact with it needs to be sanitized. Avoid exposing it to open air or other possible situations where microbes can be introduced. The result will be off flavors.

### 2. Cool

At the end of the boil the wort needs to be chilled to 80°F as fast as possible, ideally less than 30 mins. If you have a chiller, sanitize it by placing it in the boil for the last 10 mins. If not, cover the pot and place it in an ice bath.

### 3. Transfer

Sanitize the fermenter, your hands and anything else and transfer the wort into the fermenter, leaving the “trub” in the bottom of the pot. Top off the fermenter to the 5 gallon mark with sterile cool water-- use bottled water

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## TIPS:

### How to Calculate % of Alcohol:

The basic formula used by most homebrewers is pretty simple:

$$ABV = (OG - FG) * 131.25.$$

ABV = alcohol by volume, OG = original gravity, and FG = final gravity. So, using this formula with a beer having an OG of 1.055 and a FG of 1.015, your ABV would be 5.25%.

### Benefit of Secondary fermentation:

The first benefit of secondary fermentation is that the beer will have a much purer taste because it leaves behind the sediment and prevents the dead yeast from steeping into the taste of your beer (it will also be clearer).

The secondary fermentation is also a good time to Dry Hop or for additional ingredients to add final flavors. Doing so maximizes the exposure without risking volatile aromas.

## TERMS:

Grist	milled grain
Rack	transfer wort
SG	specific gravity
OG	original gravity
FG	final gravity
Mash	grist and water
Wort	the liquid extracted during the mash process
Pitch	adding yeast to wort

or boil tap water ahead of time. When pouring be aggressive to allow a generous splash which will aerate the wort. Leave enough wort to take a sample for the hydrometer and record the Original Gravity. Never return a sample to the wort. This risks contamination.

## 4. Pitch the Yeast

In this step we will be dissolving oxygen into the wort for yeast growth. Aerate by splashing with a lid on or other method like a diffusion stone. Make sure the wort and the yeast are at room temperature. Sterilize everything that will come into contact with the packaging and follow the instructions to pitch the yeast. Fill the airlock with sterile water and place it on the fermenter. Place the fermenter in a dark place that will keep the temperature in range for the yeast used. Within 24-48 hours you should see a foam krausen on the top and CO2 bubbles in the airlock.

### Primary Fermentation 1-3 Weeks

Check the airlock regularly during the first couple of days. If there is liquid or foam pushing up through the airlock you may need a blowoff tube. Most of the primary fermentation will end in the 1st week or so, but keep it in the primary fermenter while the air lock is still active (bubbling).

### Secondary Fermenter 1-2 Weeks (if desired)

Sanitize the siphoning equipment and the secondary fermenter. Place the primary fermenter on a counter and the secondary on the floor. Place the dry hops and other additions, if included, in the bottom of the secondary. Siphon the beer into the secondary fermenter ensuring no splashing. At this point, oxygen is a threat to the beer. Replace the sanitized airlock and lid/bung and place the fermenter back in a dark area.

## 5. Bottling

- **IMPORTANT!** Sanitize anything that will be used during this stage.
- **IMPORTANT!** Do not to introduce oxygen by splashing or agitating the beer.

For about 2.5 Volumes of CO2, use 4.5 oz of corn sugar. Sanitize bottles, caps and all bottling equipment. Mix the corn sugar with 2 cups of water and bring to a boil for 10 minutes. Cover and let cool to room temp. Pour the mixture into the bottom of the bottling bucket. Transfer the beer into the bucket and take a sample for the Final Gravity measurement in the hydrometer. This sample should be before the beer mixes with the corn sugar. We recommend taking the sample from what is left in the fermenter. Fill with a bottle filler and cap the bottles paying attention to sanitation. Store the bottles at room temperature in a dark place for 2 weeks.