



May all your fermentations be Great Fermentations!

## 46th Street Station Smoked Ale – A Local Series Norwegian style smoked ale!

For this Local Series beer, we teamed up with Terra Courtney and Black Circle Brewing Co to bring you a delicious Norwegian smoked ale! This beer utilizes Stjordal malt, locally-produced in the Sainnhus at Sugar Creek Malting Co. This traditional Nordic-inspired malt gives a smooth smokiness to the beer, which also features local hops from Crazy Horse Hops!

### BEER SPECS

**Original Gravity:** 1.049—1.052

**Final Gravity:** 1.009—1.012

**IBU:** 15-18

**ABV%:** 4.9% - 5.6%

**Yield:** 5 Gallons

### NOT INCLUDED IN KIT

Irish Moss (*for clarity, optional*)

Yeast

Bottle Caps (*53 caps needed*)

Priming Sugar (*5oz or 3/4 cup*)

### USEFUL INFORMATION

Wort = unfermented beer

First wort hops = hops added before bringing wort to a boil

Rack = to transfer from one vessel to another

Pitch = to add yeast to the fermenter

OG = Original Gravity: Specific Gravity Before Fermentation

FG = Final Gravity: Specific Gravity After Fermentation

ABV = Alcohol by Volume

ABW = Alcohol by Weight

IBU = International Bittering Units

#### Alcohol by Volume Equation:

$$\%ABW = (OG-FG) \times 105$$

$$\%ABV = ABW \times 1.25$$

### RECIPE DETAILS

**6.0 lbs.** Light dry malt extract

**1.0 lbs.** Sugar Creek Stjordal Smoked Malt

**1 oz.** Juniper Berries, added to the steeping bag with specialty grains - Simply steep with the steeping grains.

**1.0 oz.** Chinook hops, steeped for 20 minutes pre-boil (see Brewer's Notes below)

**1.0 oz.** Michigan Copper hops, steeped for 20 minutes pre-boil (see Brewer's Notes below)

**1.0 tsp.** Irish moss (*optional*), added 20 min from the end of the boil

### FERMENTABLES

### SPECIALTY GRAINS & JUNIPER

### BOIL SCHEDULE

**YEAST SUGGESTIONS:** Omega Yeast OYL091 Hornindal Kveik, Omega Yeast OYL061 Voss Kveik, or Lallemend Voss Kveik Dry Yeast

**Brewer's Notes:** This beer is based on historical Norwegian brewing techniques which are a little different than our modern brewing ways. The juniper berries go directly in with the steeping grains in the muslin grain bag. Traditionally, the wort was run through the hops on the way to the boil kettle. We recommend steeping the grains for 30 minutes, then removing the grains and adding the hops in a muslin hop bag and steeping for 20 minutes, then removing the hops before bringing to a boil. If you'd like, you can follow standard modern techniques and simply add the hops at the beginning of the 60 minute boil. However, this will lead to a much hoppier and more bitter beer.

### EQUIPMENT

#### REQUIRED EQUIPMENT

- 3 gal or larger Brew Pot
- 6.5 gal Primary Fermenter
- Siphon Hose/Racking Cane
- Large Spoon or Paddle
- Air Lock
- Hydrometer
- Thermometer
- Cleanser
- Sanitizer
- Bottles or Kegging System

#### RECOMMENDED EQUIPMENT

- 7.5 gal Brew Pot
- Wort Chiller
- 5 gal Secondary Fermenter
- Thief
- Oxygen Cylinder
- Aeration Stone
- Auto Siphon

#### Included Muslin Bags

Grain = 1

Hop = 1



# Brewing Instructions:

# 46TH STREET STATION

## PRIOR TO BREWING

1. **Clean and Sanitize** all equipment, tubing, etc.
2. For this beer, we recommend using a Kveik yeast strain, which is a traditional yeast from Scandinavia. These traditional farmhouse yeasts have a wider temperature range than standard ale yeasts, and can ferment very quickly!

## BREWING DAY

1. Fill kettle with water and heat to 160F.
  - Partial boil method: fill kettle with as much water as possible while leaving room for grains, malt extract, and boil volume.
  - Full boil method: fill kettle to approximately 6.5 gal water for a volume of 5 gal post-boil.
2. Rehydrate Irish moss in 1/2 cup warm water. Set aside (*optional, for clarity*).
3. Turn off burner (remove kettle from heating element if using an electric stove). Place **crushed specialty grains** and **1 oz juniper berries** in a muslin bag and soak in **150-155F water for 30 minutes**. Remove bag, and allow remaining water in grains to drain into kettle. Do not squeeze the grains.
4. Add hops in a muslin hop bag and **steep at 150-155F for 20 minutes**, then remove.
5. While stirring, add malt extracts until fully dissolved.
6. Turn the heat on and bring wort to a boil. **WATCH OUT!** Just before the boil, the wort rapidly rises.
6. Boil for a total of 60 minutes, adding the optional Irish Moss with 20 minutes left in the 60 minute boil.
7. At end of boil, chill wort as quickly as possible to **65-95F** with a wort chiller or an ice bath. Place lid on kettle while chilling.
8. Siphon or pour cooled wort into fermenter leaving as much sediment behind as possible:
  - Partial Boil: Add sterile water (packaged drinking water) to fermenter to reach 5.25 gal
  - Full Boil: Siphon entire volume of wort into fermenter.
9. **Aerate wort** well by stirring, shaking or oxygenating.
10. Sanitize yeast package and use sanitized scissors to open package. Pitch yeast and attach airlock. If using a yeast starter, pitch entire contents of yeast starter into wort.
11. Move fermenter to a dark place with a steady temperature of **65-95F**.

## FERMENTATION

1. Primary Fermentation: Allow beer to ferment for 7-14 days, then proceed to STEP 2 or 3.
2. Secondary Fermentation (*optional*): Transfer beer to a 5 gal carboy, leaving behind the sediment, and allow to sit for 7 to 14 days, then proceed to STEP 3.
3. Check gravity prior to proceeding with bottling to ensure fermentation is complete. (Reference *Final Gravity* under 'Recipe Details')

## BOTTLING

1. Ensure there is no bubbling in the airlock, and that your beer has reached final gravity.
2. **Clean and sanitize** all bottles, caps, bottling equipment and bottling bucket.
3. Dissolve **3/4 cup (5 oz) priming sugar** in 2 cups boiling water. Boil for 5 min then chill to 70-80F and add to bottling bucket.
4. Siphon beer from fermenter into bottling bucket, being careful not to rouse up sediment on bottom of fermenter.
5. Stir thoroughly but gently to avoid introducing oxygen.
6. Using the bottle filler, fill bottles and cap them.
7. Store bottles at room temperature for **2 weeks** or until carbonated

## TIPS FOR SUCCESS

1. Clean AND Sanitize!
2. Avoid using softened water or Reverse Osmosis water.
3. Make sure the specialty grains are loose inside the muslin bag to ensure water reaches the grain in the middle of the bag.
4. Tie muslin bag to handle of kettle to prevent potential scorching on bottom of kettle.
5. Be sure not to exceed 155F while steeping grains to avoid unwanted flavors.
6. Turn off heat source and stir well while adding malt extract to avoid scorching on the bottom of the kettle.
7. Keep a spray bottle of water at hand to spray top of wort if it nears a boil over.
8. While racking, be sure not to introduce oxygen into your beer by splashing or shaking.
9. Maintain a constant temperature during fermentation.
10. Elevate carboy a few days before racking to allow sediment to settle.
11. Visit [www.greatfermentations.com](http://www.greatfermentations.com) for more brewing tips and tricks.

