

## RECIPE INSTRUCTIONS:

# Angry Cardigan Brown Ale

Batch Size: 5 gal  
Alcohol: 5.2% alc./vol.  
Colour: 23 (SRM)  
Bitterness: 32 IBU  
Original Gravity: 1.054

## KIT INCLUDES:

### GRAIN

- 8lb 2-Row Malt
- 1lb Special Roast
- 10oz 80L Caramel Malt
- 8oz Flaked Oats
- 4oz Chocolate Malt
- 2.0oz Black Malt

### HOPS

- 1.5oz Willamette
- 0.5oz Motueka

### YEAST

- Danstar Windsor Ale, Safale S-04, or White Labs WLP005 British Ale

## NOT INCLUDED BUT REQUIRED:

- Priming sugar (dextrose or table sugar)
- Sanitizer
- Basic brewing equipment
- Mash tun

Angry Cardigan Brown Ale is an American Brown Ale chock full of malty, sweet, nutty, and hoppy goodness. True to style, this beer is dark brown in colour with a light tan head. It's medium body and citrusy hop character round out the nutty malt flavour and smooth mouthfeel. This beer is like wearing a good cardigan on a bad day; bittersweet and the perfect choice when it's cold outside.

## 1 DAY 1

## Pre-Brew

- Remove yeast from the refrigerator 3-6 hours before it's needed.

## Mash

- Heat 3.3 gal (11.5L) of water to 73°C and pour into mash tun.
- Slowly pour in the grist. Stir well.
- The mash temperature should now be close to 67°C. If it's not apply hot or cold water until the temperature stabilizes to 67°C.
- Cover the mash tun and let the mash rest for 60min.
- Prepare your sparge water in a separate pot by heating 2.91 gal (11.0L) of water to 75°C. Prepare water used to mash out by heating 1.84 gal (7.0L) of water to 94°C.
- Timer: 0min. Mash out - add water to mash tun and let rest for 10min. The mash temperature should now be 75°C.

## Lautering

- *CAUTION! Be careful, everything from now on is hot.*
- Strain the liquid wort from the mash tun into the boil kettle. While straining sprinkle water (fly sparge) over the grain bed with 2.91 gal (11.0L) of water at 75°C. Sprinkle water at the same rate as the straining wort until all water has been added.

## Boil

- Heat the wort to a boil.
- When wort reaches a boil start the timer at 60min. Add 1oz Willamette hops.
- With 30min remaining, add 0.5oz Motueka hops to the boil.
- Timer: 15min. Add 0.5oz Willamette hops.
- Timer: 0min. Remove from heat source to end boil.

## Fermentation

### PRIMARY FERMENTATION

- Quickly cool the wort to approximately 24°C. An immersion chiller is ideal but an ice bath works too.
- *IMPORTANT! Sanitize anything that will be used from this point forward.*
- Pour or rack (see tip 1) the cooled wort in while making lots of splashes to ensure good oxygenation. Be sure to leave any trub behind. NOTE! This is the only time when oxygen is good.
- If required add cold tap water until the volume reaches 5 gal (18.9L).
- Using a hydrometer take a specific gravity (SG) reading of the wort and record the result. This is called the Original Gravity (OG). Also record the potential alcohol %.
- Pitch the yeast when the wort has reached 21-24°C. Be sure to follow the

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### TIPS:

❶ A great way to start the siphon is by using a sanitized turkey baster or an Auto-Siphon. Do not use your mouth to begin suction.

❷ How to Calculate % of Alcohol: Each SG reading on the hydrometer corresponds to a % alcohol value. When taking an SG reading simply read the corresponding % value on the % scale. Subtract the FG corresponding % from the OG corresponding %. The result is the approximate percentage of alcohol by volume in your beer. For example:

- If the OG = 1.09 (or 12.35%) and the FG = 1.01 (or 0.1%)
- $12.35 - 0.1 = 12.25$  % alc./vol.

### TERMS:

Grist	milled grain
Rack	transfer wort
SG	specific gravity
OG	original gravity
FG	final gravity
Mash	grist and water
Wort	pronounced <i>wert</i> , it's the liquid extracted during the mash process

directions on the yeast package.

- Seal the fermenter. Place a rubber stopper and airlock into the hole of the fermenter lid. Add water to the airlock until it reaches the fill line.
- Place the fermenter in a warm, dark area.
- 3-15 hours later active fermentation should begin. This stage is characterized by the formation of foam and sometimes bubbles that create a gratifying "bloop" sound in the airlock. At this stage move the fermenter to a dark room that is between 19-20°C.

## ❷ DAY 14

### Bottling

- **IMPORTANT!** Sanitize anything that will be used during this stage.
- **IMPORTANT!** Be sure not to introduce oxygen by splashing or agitating the beer.
- Using a hydrometer take an SG reading and record the result. This is called the Final Gravity (FG). Also record the potential alcohol %. To calculate the percentage of alcohol see tip ❷.
- Mix your choice of priming sugar (see below) with 2 cups of water.
  - Corn Sugar (Dextrose) – use 4.1oz or
  - Table Sugar (Sucrose) – use 3.7oz
- Bring the solution to a boil and pour into a 5 gallon pail (bottling bucket).
- Carefully rack the beer into the bottling bucket. Gently stir the mixture.
- Carefully fill and cap the bottles.
- Store the bottles at 18°C for 2-4 weeks.

## ❸ DAY 28-42

### Serving

- After 2 weeks pop one open and try it. Pour the beer into a glass leaving sediment in the bottle. Observe head formation, head retention, and carbonation. If it's not yet to your liking wait another week or two and try one again.
- When it's ready move the beer to a cool or cold location and enjoy!

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