



IBU's: 6	OG: 1.033-1.035	FG: 1.008-1.010
ABV: 3.0%-3.5%	Ferm Temp: 68°-72°F	
<u>Glossary</u> OG – Original Gravity FG – Final Gravity DME – Dried Malt Extract LME – Liquid Malt Extract ABV – Alcohol by Volume IBU – International Bittering Units		

<u>Ingredients</u>
<u>FERMENTABLES</u>
3.0 lbs Wheat LME
<u>SPECIALTY GRAINS</u>
1.00 lb Brewers Malt (Briess)
0.75 lb Light Wheat (Avangard)
0.25 lbs Flaked Rye
<u>HOPS</u>
0.75 oz Hersbrucker Hops (Bittering)
<u>FININGS</u>
1 tsp. Irish moss
<u>YEAST</u> Wyeast 3191 Berliner-Weisse Blend
<i>This blend includes a German ale strain with low ester formation and a dry, crisp finish. The Lactobacillus included produces moderate levels of acidity. The unique Brettanomyces strain imparts a critical earthy characteristic that is indicative of a true Berliner Weisse. When this blend is used, expect a slow start to fermentation as the yeast and bacteria in the blend is balanced to allow proper acid production. It generally requires 3-6 months of aging to fully develop flavor characteristics.</i>

<u>Included Equipment</u>
Muslin Grain Bag for Hops
Muslin Grain Bag for Specialty Grains
Muslin Grain Bag for dry hopping.

<u>Recommended Brew Day Equipment</u>	
4 Gal. Brew Pot	6.5 Gal. Fermenter
Hydrometer	Thermometer
Long Spoon or Paddle	No-Rinse Sanitizer
Airlock	Cleanser

<u>Recommended Procedures</u>
<p><u>BREW DAY</u> (Date ___ / ___ / ___)</p> <ol style="list-style-type: none"> <li><u>READ</u>: Read all of the recommended procedures before you begin.</li> <li><u>ACTIVATE YEAST</u>: If using Wyeast liquid yeast, activate the yeast at least 5 hours prior to pitching. Yeast is viable even if it only slightly swells.</li> <li><u>SANITIZE</u>: Thoroughly clean and sanitize ALL brewing equipment and utensils that will come in contact with any ingredients, wort or beer.</li> <li><u>STEEP GRAINS</u>: Place enough water into a pot to cover specialty grains. Heat to temperature listed in the <b>BREW DAY SCHEDULE</b>. Pour crushed grains into grain bag and tie a loose knot at the top of the bag<sup>1</sup> and place in water. Steep for timeframe listed in <b>BREW DAY SCHEDULE</b>. <b>DO NOT BOIL THE GRAINS</b>. Remove bag and allow it to drain into the pot (do not squeeze). Sparge (slowly run water through) the grains with 2 gallons of 168° water. Discard the grain filled bag. Your water is now wort.</li> <li><u>START BOIL</u>: If needed, add enough water to bring to 3 gallons. Bring your wort to a gentle, rolling boil. <b>Add half the malt extract</b><sup>2</sup>. Continuously stir the extract into the wort as it returns to a gentle, rolling boil<sup>3</sup>.</li> <li><u>ADD HOPS</u><sup>4</sup>: Place hops the provided hop bag and clip to the side of the pot. Do not tie shut as the same bag will be used for each hop addition. Be careful not to let the wort boil over the pot. Using the provided <b>BREW DAY SCHEDULE</b> (right), note the time the bittering hops were added. Continue the gentle, rolling boil.</li> <li><u>FOLLOW SCHEDULE</u>: The <b>BREW DAY SCHEDULE</b> (right) will guide you through the remaining addition of ingredients until the boil is complete. Fill in the estimated times to help keep your brew on schedule.</li> <li><u>COOL WORT &amp; TRANSFER</u>: Cool the wort down to approximately 70°F by placing the brew pot in a sink filled with ice water<sup>5</sup>. Pour or siphon wort into a sanitized fermenter. Avoid transferring the heavy sediment (trub) from the brew pot to the fermenter.</li> </ol>

<u>BREW DAY SCHEDULE</u>
Steep grains at 150° for 30 min.
1. Bring wort to a boil.
2. <b>Add half the malt extract</b> and return to a boil. ___:___ (time)
3. Add Bittering hops ___:___ (time)
4. Boil 45 minutes
5. Add Irish moss <b>and remaining malt extract</b> ___:___ (time)
7. Boil 15 minutes
11. Terminate boil ___:___ (time)
Total Boil Time: 60 Minutes - Continue to Step #8

<u>All Grain Instructions</u>
Mash 3.5 lbs 2-Row Brewers Malt and 2.25 lb Wheat Malt with specialty grains in 8.25 quarts of water to get a single infusion mash of 150° F for 60 minutes. Sparge with hot water of 170° F to get 6 gallons of wort. Bring to boil and follow the BREW DAY SCHEDULE.
<u>Advanced Instructions</u>
For a traditional Berliner Weisse use Wyeast German Ale (1007) and reduce the starting amount of Pilsner by one pound. Perform a sour mash by maintaining a mash temp of 120° for 4 days adding 0.5 lbs of Pilsner each day. Heat to a mashout of 168° and sparge. Bring to boil and follow the BREW DAY SCHEDULE.

## Recommended Procedures (continued)

9. **ADD WATER:** Add enough clean water (approx. 68° - 72°F) to the fermenter to bring your wort to approximately 5 gallons. Thoroughly stir the water into the wort. Be careful not to add a volume of water that will cause the wort to fall outside of the OG range specified in the BREW STATS<sup>6</sup>. Once you are satisfied your wort is at the proper volume and within the OG range, record the OG in the ABV% CALCULATOR (right).

10. **PITCH YEAST:** If using liquid yeast open package and pour over the top of the wort surface. If using a dry yeast sprinkle the contents of the yeast sachet over top of the entire wort. Firmly secure the lid onto the fermenter. Fill your airlock halfway with water and gently twist the airlock into the grommeted lid. Move fermenter to a dark, warm, temperature-stable area (approx. 68° - 72°F).

### FERMENTATION

11. **MONITOR & RECORD:** The wort will begin to ferment within 24 hours and you will notice CO<sub>2</sub> releasing (bubbling) out of the airlock. Within 4 - 6 days the bubbling will slow down until you see no more CO<sub>2</sub> being released. When fermentation is complete (no bubbles for 48 hours) take a FG reading with a sanitized hydrometer and record it in your ABV% CALCULATOR<sup>7</sup>. (*Dry hopped beers requires a secondary fermentation.*<sup>7</sup>)

BOTTLING DAY (DATE \_\_/\_\_/\_\_)

12. **READ:** Read all of the recommended procedures before you begin.

13. **SANITIZE:** Thoroughly clean and sanitize ALL brewing equipment and utensils that will come in contact with any ingredients, wort or beer.

14. **PREPARE PRIMING SUGAR:** In a small saucepan dissolve priming sugar into 2 cups of boiling water for 5 minutes. Pour this mixture into a clean bottling bucket. Carefully siphon beer from the fermenter to a bottling bucket. Avoid transferring any sediment. Stir gently for about a minute.

15. **BOTTLE:** Using your siphon setup and bottling wand, fill the bottles<sup>8</sup> to within approximately one inch of the top of the bottle. Use a bottle capper to apply sanitized crown caps.

16. **BOTTLE CONDITION:** Move the bottles to a dark, warm, temperature-stable area (approx. 64° - 72°F). Over the next two weeks the bottles will naturally carbonate. Carbonation times vary depending on the temperature and beer style, so be patient if it takes a week or so longer.

## BREW TIPS

<sup>1</sup>The grains should not be compacted inside the bag. Grains should steep loosely allowing the hot water to soak into all of the grain evenly.

<sup>2</sup>Run LME container under hot water to allow the extract to pour easier.

<sup>3</sup>Pay careful attention that the extract does not accumulate and caramelize on the bottom of your brew pot.

<sup>4</sup>When consumed, hops can cause malignant hyperthermia in dogs, sometimes with fatal results.

<sup>5</sup>To avoid bacteria growth cool as rapidly as possible. Do not add ice directly to the wort. Alternatively, you can use a brewing accessory like a Wort Chiller.

<sup>6</sup>Use a sanitized hydrometer while adding water to monitor the SG.

<sup>7</sup>Transferring your beer to a secondary carboy is *required for dry hopped beers*, see "Two-Stage (Secondary) Fermentation" sidebar below.

<sup>8</sup>Make sure bottles are thoroughly clean. Use a bottle brush if necessary to remove stubborn deposits. Bottles should be sanitized prior to filling.

### Recommended Bottling Day Equipment

Bottling Bucket	12 oz. Bottles (appx. 53)
Siphon Setup	Bottle Brush
Bottle Filling Wand	Bottle Caps
Capper	Sanitizer

### ABV% Calculator

(OG - FG) x 131.25 = ABV%

(\_\_\_\_\_\* - \_\_\_\_\*\*) x 131.25 = \_\_\_\_%

\*OG from Step #8

\*\*FG from Step #10

## Two-Stage (Secondary) Fermentation

High Gravity recommends home brewers employ the practice of a two-stage fermentation. This will allow your finished beer to have more clarity and an overall better, purer flavor. (*This step is necessary when beers require dry hopping.*)

All you need is a 5-6 gallon carboy, drilled stopper, airlock and siphon setup to transfer the beer. You will also need to monitor and record the SG with your hydrometer when the beer is in the 'primary'. When the fermentation slows (5-7 days), but before it completes, simply transfer the beer into the carboy and allow fermentation to finish in the 'secondary'. *If kit contains dry hops they should be added to the provided grain bag and placed in the carboy for the 3-4 days prior to bottling.* Try not to leave hops in secondary for longer than 3-4 days as it can cause an unpleasant grassy character. Consult High Gravity to learn more about this technique. (SECONDARY RACK DATE \_\_/\_\_/\_\_)