# Brewing Admiral Beer: A Comprehensive Guide

## 1. Malt Selection and Mashing:

For Admiral beer, we'll use a blend of pale malt as the base, with some crystal malt for color and sweetness.

A typical grain bill might include:

- 80% Maris Otter pale malt

- 15% Vienna malt

- 5% Crystal malt (60L)

Mashing temperature: 152°F (67°C)

Mash duration: 60 minutes

Maintaining the correct mashing temperature is crucial for optimal enzyme activity. At 152°F, you'll achieve a good balance between fermentable and non-fermentable sugars, resulting in a medium-bodied beer with a balanced sweetness.

## 2. Sparging:

Sparge with water at 168°F (76°C) to extract the remaining sugars from the grain bed. This temperature helps to maintain efficiency without extracting excessive tannins that could lead to astringency in the final beer.

## 3. Boiling and Hop Additions:

Boil duration: 60 minutes

Hop additions:

- 60 minutes: Add Admiral hops for bittering (calculated to achieve desired IBUs, typically 30-40 IBUs for a balanced English-style ale)

- 15 minutes: Add a small amount of Admiral hops for flavor

- 5 minutes: Add a final dose of Admiral hops for aroma

Admiral hops have an alpha acid content of 13-16%, so adjust your additions accordingly to achieve the desired bitterness. The late additions will contribute to the beer's characteristic flavors and aromas, including citrus, herbal, and spicy notes.

Maintain a rolling boil throughout the 60 minutes to ensure proper isomerization of alpha acids and drive off unwanted volatile compounds.

## 4. Fermentation:

Fermentation temperature: 64-68°F (18-20°C)

Duration: 7-10 days for primary fermentation

Choose an English ale yeast strain such as Wyeast 1098 (British Ale) or White Labs WLP002 (English Ale) for authentic flavor development.

Temperature control during fermentation is crucial for flavor development. At the lower end of the range (64°F), you'll promote cleaner fermentation with subtle esters. At the higher end (68°F), you'll encourage more pronounced fruity esters characteristic of English ales.

## 5. Dry Hopping (Optional):

If you desire more pronounced hop aroma, consider dry hopping with Admiral hops.

Dry hop addition:

1-2 oz per 5 gallons

Duration: 3-5 days

Temperature: Same as fermentation temperature

Add dry hops when primary fermentation is nearly complete (usually around day 5-7) to maximize aroma extraction while minimizing the risk of oxidation.

## 6. Conditioning:

After primary fermentation and dry hopping (if applicable), cold crash the beer to 35-40°F (2-4°C) for 2-3 days. This will help clarify the beer and settle out yeast and hop particles.

## 7. Packaging:

For bottle conditioning:

- Prime with 3/4 cup of corn sugar per 5 gallons

- Bottle and store at room temperature (68-72°F / 20-22°C) for 2 weeks

For kegging:

- Transfer to a sanitized keg

- Carbonate to 2.2-2.4 volumes of CO2

- Store cold (38-40°F / 3-4°C) for at least a week before serving

# Flavor Profile and How Conditions Affect It:

## 1. Malt Character:

The combination of Maris Otter, Vienna, and Crystal malts provides a robust malt backbone with notes of biscuit, toast, and subtle caramel. The mashing temperature of 152°F ensures a balance between fermentable and non-fermentable sugars, contributing to the beer's body and mouthfeel.

## 2. Hop Character:

Admiral hops impart a clean bitterness when used early in the boil. The late additions contribute to the beer's flavor and aroma profile, which can include: - Citrus notes (particularly orange and grapefruit) - Herbal characteristics - Spicy undertones - Subtle earthy qualities The timing and amount of hop additions will significantly impact the final flavor profile. More early additions will increase bitterness, while more late additions will enhance aroma without adding much bitterness.

## 3. Yeast-Derived Flavors:

The choice of an English ale yeast and the fermentation temperature range of 64-68°F (18-20°C) will produce subtle fruity esters and a slight mineral character typical of English ales. Higher fermentation temperatures within this range will promote more pronounced ester production, while lower temperatures will result in a cleaner flavor profile.

## 4. Water Profile:

While not mentioned earlier, water chemistry plays a crucial role in the final flavor of the beer.

For an English-style ale featuring Admiral hops, aim for a water profile with:

- Calcium: 50-100 ppm

- Sulfate: 50-150 ppm

- Chloride: 50-100 ppm

This balanced profile will enhance the malt character while allowing the hop flavors to shine through. A higher sulfate-to-chloride ratio will accentuate hop bitterness and dryness, while a lower ratio will emphasize malt sweetness and fullness.

## 5. Oxidation Control:

Throughout the brewing process, minimizing oxygen exposure after the hot side of brewing is crucial for preserving the delicate hop flavors and aromas imparted by Admiral hops. Use oxygen-absorbing caps when bottling, or purge kegs with CO2 before transferring the beer to prevent oxidation, which can lead to cardboard-like off-flavors and diminished hop character.

## 6. Serving Temperature:

Serve Admiral beer at 50-55°F (10-13°C) to fully appreciate its complexity. At this temperature range, the malt flavors will be more pronounced, and the hop character will be more evident, allowing you to enjoy the full spectrum of flavors this beer has to offer.

In conclusion, brewing a high-quality Admiral beer requires attention to detail throughout the brewing process. By carefully controlling mashing temperatures, hop additions, fermentation conditions, and packaging procedures, you can create a well-balanced beer that showcases the unique characteristics of Admiral hops while maintaining a solid malt backbone typical of English-style ales. Remember that small adjustments to the brewing process can have significant impacts on the final flavor profile, so don't be afraid to experiment and fine-tune your recipe to achieve your desired results.