EXTRACT

Original Recipe by:
Eli Palma

SAN DIEGO BEER NEWS
HOMEBREW SUMMER
HOME BREW MART
INGRAINED SINCE 1992

HARLAND BREWING CO

HOPPY

SISO – Extra Pale Ale

BREW DAY

Stage/Time	Type	Qty	Name	%AA	IBU
Steep	Grain	1 lb	Weyer. Pale Wheat	-	-
Boil/60 min	Hop	1 oz	Simcoe	11%	34.5
Boil/15 min	Extract	5 lb	Pilsen Light DME	-	-
	Sugar	1 lb	Corn Sugar		
	Clarifier	1 tab	Whirlfloc	-	-
	Nutrient	1 tsp	Yeast Nutrient	-	-
Whirlpool	Hop	4 oz	Mosaic	12%	8.9

FERMENTATION AND BEYOND

Stage	Type	Qty	Name	Notes
Pitch	Yeast	1 pkg	Murphy & Sons Plzen or WLP800 Pilsner	64 - 68˚F
Dry Hop	Hop	2 oz	Cryo Mosaic	1 days ⇨ bottle
		2 oz	Strata	
		2 oz	Superdelic	



American Pale (18B)

Original Gravity: 1.045 – 1.060 SG

Final Gravity: 1.010 – 1.015 SG

Bitterness: 30 – 50 IBUs

ABV: 4.5 – 6.2%

SRM: 5 - 10

Overall Impression: A pale, refreshing and hoppy ale, yet with sufficient supporting malt to make the beer balanced and drinkable. The clean hop presence can reflect classic or modern American or New World hop varieties with a wide range of characteristics. An average-strength, hop-forward pale American craft beer.

TARGET STATS

Batch Size	5 gal
Original Gravity	1.050
Final Gravity	1.010
~%ABV	5.4
IBU	43.6
SRM	3

BREW NOTES

Boil Duration	60 min
Whirlpool Temp	170˚F
Whirlpool Time	20 min
Dry Hop Duration	1 days

Notes

Whirlpool duration and temperature can make a difference with the final bitterness of a beer. With this recipe, allow the wort to cool down to below 180˚F before adding the whirlpool hop addition.

Pitch yeast at 64F and maintain during fermentation. Once gravity dips below 1.020, bring temperature up to 68F again for a diacetyl rest. Dry hop for 24 hours at terminal gravity.

Quick Brewing Instructions

PREP

Measure out all your ingredients ahead of time:

- 3 gallons of water in your boil kettle
- 3 gallons of sanitized, pre-chilled water in the fridge
- All boil additions, ideally marked with their appropriate timings

Pour pre-milled grain into a steeping bag and tie the top of the bag into a knot.

STEEP

Not all recipes will call for steeping grains, since some beers benefit from being as dry in flavor and pale in color as possible. Steeping grains are used to increase the color, the sweetness, and the overall density of your finished beer. Think of it like making a very large cup of malt tea, except you don't want to use boiling water. Your ideal temperature range for the steep is between 150 and 155˚F.

1. Heat your water up to 158˚F, then turn off your heat and add your steeping bag of grain. This should bring the temperature down to 155˚F or so. The larger your bag of steeping grains, the more it will change the temperature of the water.
2. Cover the pot with a lid to maintain temperature for 30 minutes.

After 30 minutes, remove the grain from the pot and let it drip over the pot for a few moments before discarding. Do not squeeze or wring out the bag.

BOIL

The purpose of your boil is to: [1] to sanitize, [2] to extract bitterness (alpha acids) from hops, and [3] to break down particulates for a clearer finished product. The total boil time is largely determined by how bitter you intend the beer to be. The extract only needs to be boiled long enough to sanitize and break down particulates, which is why our recipes usually add extracts in the last 15 minutes of the boil.

1. Once your steep is complete and the grain bag is removed, begin heating your pot to a boil.
2. Once you achieve a stable rolling boil, start your timer for the total boil time (see recipe) and begin adding your additions at the appropriate times. With each addition, be sure to add slowly and keep an eye out for boil-overs.
3. In between additions, you should take the opportunity to make a bucket for sanitizing any equipment that will contact your unfermented beer (called "wort") after the boil.
    a. Measure out 5 gallons of water in your fermentor and add 1 oz of sanitizer. If you haven't already, be sure to mark your fermentor at the 5 gallon level for later.
    b. After about a minute, transfer the solution into a bucket to sanitize the rest of your equipment (e.g. funnel, airlock, stopper, wine thief, etc.)

    Note: If it's a glass fermentor, **do not pick it up** and attempt to pour it out; use a siphon to transfer the liquid safely.
4. With 15 min left of the boil, turn off the heat to the pot. Slowly add your malt extract, constantly stirring to ensure that it is completely dissolved. When clumps are no longer visible, turn the heat back on to resume boiling. At this point, boil-overs are much more likely, so have countermeasures ready. When the foam begins to rise rapidly:
    a. Be prepared to turn the heat down or off.
    b. Have a spray bottle of water ready to help keep the foam at bay.
    c. If the foam does not re-incorporate into the wort on its own, the heat is too high.
5. Add any further additions at the appropriate times and begin preparing your cooldown bath.

60 MIN	• 1 oz Simcoe
15 MIN	• 5 lb Pilsen DME • 1 lb Corn Sugar • Clarifier & Nutrient
WHIRLPOOL	*Add at 170˚F and steep for 20 min* • 4 oz Mosaic

COOLDOWN

Now that your boil has concluded, everything that touches your wort must be sanitized. Cooling your wort down to pitchable temperatures is important to improve clarity and to reduce the chances of bacterial infection.

1. Transfer the hot kettle from the burner to a sink or tub filled with cold water. Carefully swirl the pot to better cool the wort inside.

    Note: Do not add ice at this time. Cold tap water should be enough of a contrast to rapidly cool your near-boiling wort to more manageable temperatures. Save the ice for the hard part (i.e. getting from 120˚F to 80˚F or lower).
2. As the water becomes hot, refill your tub with cool water until the wort gets below 150˚F. At this point adding ice to the bath can help cool the wort to target more quickly.
3. Once your wort has cooled to 80˚F or less, vigorously pour it into your sanitized fermentor. Add the prepared, sanitized cold water (refrigerating the water as suggested in the prep stage will help to cool your wort even further) to the fermentor until the total volume has reached 5 gallons.

Shake the carboy for a few minutes to oxygenate and to evenly mix the water with your wort. Now is the time to take a hydrometer reading and record your Original Gravity measurement.

PITCH

Adding your yeast is what changes the liquid in your fermentor from "wort" to "beer."

1. Sanitize the exterior of the yeast package as well as any tools used to open it.
2. Add your yeast to the fermentor and seal with an airlock and stopper—being sure to fill the airlock to the appropriate mark with sanitizing solution.
3. Store in a cool dark place for the duration of fermentation.

WLP800 – Pilsner Yeast

Ferment at 64 - 68˚F

DRY HOP

The dry hop stage comes after fermentation is complete. Unlike hops adding during the boil, dry hop additions contribute only hoppy aroma—not bitterness—to the finished beer. To maximize retention, wait until fermentation activity (i.e. bubbling in the airlock) has ceased.

1. Remove your airlock and pour your dry hop additions directly into the beer. Replace the airlock.
2. Some recipes have more than one hop addition, add any subsequent additions at the appropriate times.

- 2 oz Cryo Mosaic
- 2 oz Strata
- 2 oz Superdelic

Package after 1 days