



## Great Lakes Christmas Clone

An Adventurous Clone of a staple holiday treat. Spiced with honey, cinnamon and ginger.

Original Gravity : 1.037

Final Gravity : 1.009

Color SRM : 5.13

Alcohol by Volume : 3.58

IBU : 30.10

### PARTIAL MASH

MM99-1225

Procedure : Please read all the instructions before you begin brewing, to ensure you have all the ingredients and fully understand the process.

<b>Clean</b>	It is important to thoroughly clean and sanitize all of your brewing equipment.  Necessary Equipment and Supplies: - Brew in a Bag grain bag - Minimum 5 gallon boil kettle - 8 to 10 gallon boil kettle is ideal, as this would allow for a full boil.	<b>Grains :</b>  <b>3.5 lbs 2-Row</b> <b>1 lbs White Wheat</b> <b>1 lbs Crystal Malt (40 °L)</b> <b>0.25 lbs Special Roast</b> <b>0.1875 lbs Roasted Barley</b>																												
<b>Mash</b>	Heat 3 gallons of water to 152°F. Place the grains in the grain bag and place into the water. The temperature will drop once the grains are added, heat the mash back up to 152° F. Hold this temperature in the Brew Pot for 1 hour. You are now mashing. After 1 hour, remove the grain bag and let it drain into brew pot. Be careful not to scorch your brew bag if re-heating.																													
<b>Conversion</b>	Check for conversion of starch to sugar. This will be done by placing a small amount of grain free wort on a white plate or bowl. Add one drop of "Tincture of Iodine" to this sample. If it quickly disappears or stays/remains red, you are ready to move on. If the iodine turns black, starch is still present. Mash for an additional 15 minutes and test again.																													
<b>Wort is Ready</b>	It is time to start your boil.																													
<b>Fermentables &amp; Start of Boil - Begin 60 minutes of boiling</b>	Bring the "Wort" to a boil. It should be a rolling boil, but be careful to avoid a "Boil Over". Once you achieved a boil, remove the brew pot from the heat source. It is time to add the fermentables : Stir the extracts, and fermentables into the wort until it has all dissolved. It is important to make sure none of the extracts or fermentables are sitting on the bottom of the brew pot, as it will scorch when returned to the heat source. If you have an 8 Gallon Brew Pot, top off with water until you have 5.5 Gallons in the Brew Pot, you will be doing a "Full Boil". If you only have a 5 Gallon Pot, you will top off later. Return the wort to a rolling boil and follow Hop Schedule :	<b>Fermentables :</b> <b>6 lbs Pale Liquid Malt Extract</b>																												
<b>Hop &amp; Additive Schedule</b>	<table border="1"> <thead> <tr> <th>Ounces</th> <th>Hop/Additives</th> <th>Hop Addition</th> <th>Boil Time (minutes)</th> </tr> </thead> <tbody> <tr> <td>1.5 oz</td> <td>Hallertau Hop Pellets</td> <td>Boil/Bittering</td> <td>60</td> </tr> <tr> <td>0.5 oz</td> <td>Cascade Hop Pellets</td> <td>Flavor</td> <td>15</td> </tr> <tr> <td>0.5 oz</td> <td>Cascade Hop Pellets</td> <td>Aroma</td> <td>5</td> </tr> <tr> <td>1 lbs</td> <td>Honey</td> <td>Additive</td> <td>5</td> </tr> <tr> <td>2</td> <td>Cinnamon Sticks</td> <td>Additive</td> <td>5</td> </tr> <tr> <td>1 oz</td> <td>Ginger Root</td> <td>Additive</td> <td>5</td> </tr> </tbody> </table>	Ounces	Hop/Additives	Hop Addition	Boil Time (minutes)	1.5 oz	Hallertau Hop Pellets	Boil/Bittering	60	0.5 oz	Cascade Hop Pellets	Flavor	15	0.5 oz	Cascade Hop Pellets	Aroma	5	1 lbs	Honey	Additive	5	2	Cinnamon Sticks	Additive	5	1 oz	Ginger Root	Additive	5	
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<b>Cooling the wort and preparing the fermentor</b>	Once the 60 minute boil is over, it is time to cool the wort. There are many ways to cool a wort, the AIH recommendation is a wort chiller. Cool the wort to approximately 100° F as quickly as possible. The fermenting equipment needs to be sanitized. This can be done while the wort is cooling. Be sure to clean and sanitize the fermenters, airlock, lid, hose, hydrometer and test jar and rubber stopper. Anything that may come into contact with the wort should be sanitary. Transfer the wort into the primary fermenting vessel, then top off with cold water until a total of 5.125 gallons is in the primary fermenter. Aerate the wort at this point. This can be accomplished with an aeration stone or simply by rocking the fermenter back and forth once the lid is in place.																													
<b>Take the reading</b>	This is the time that you will want to take a specific gravity reading. Use a hydrometer and record the reading.																													
<b>Pitch the yeast</b>	Once the wort is cooled to 78° F, it is safe to pitch the yeast. Pitch according the proper procedures of the type of yeast you have. Seal the fermenter tight. Attach the sanitized airlock and stopper. Fill the airlock with water. Fermentation should begin within 24 - 48 hours. "Do Not Disturb" until fermentation is complete.  During the fermentation process, CO2 will begin to escape the airlock. Follow manufacturer's pitch instructions and recommended temperature for fermentation.	<b>Suggested Yeast:</b>  <b>London Ale Yeast 82-013</b> <b>London Ale 67-1028</b> <b>Windsor</b>																												
<b>Fermenting - Primary</b>	Once the Primary fermentation is complete, approximately 1 to 2 weeks, rack the beer into the secondary fermenter.																													
<b>Fermenting - Secondary</b>	If the recipe calls for Dry Hops or Additives that need to go into the secondary, add these now. The Secondary Fermentation should be complete within 1 to 2 weeks.																													
<b>Bottling</b>	Siphon finished beer into a bottling bucket. If the recipe calls for any Bottling Additives to be added to the bottling bucket, add them now.  At this point, follow bottling or kegging procedures....Cheers!																													