



AUSTIN HOMEBREW SUPPLY

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Tsing-Tao (1C) - Mini Mash

06179



Beer names are property of the respective brewery.

Recipe may not use exact ingredients used by the brewery.

If using pitchable liquid yeast, let the yeast warm up to 72 - 78 degrees F. The longer the yeast sets at this temperature range, up to 24 hours, the faster the beer will start fermenting.

READ THESE INSTRUCTIONS. VERIFY YOU HAVE EVERYTHING. SANITIZE EVERYTHING!

Make sure everything is clean to the eye. Then clean and sanitize using sanitizers like One-Step, Iodophor, or Cleanitizer. If required by the manufacturer, rinse off the sanitizing solution thoroughly. In a 20 quart or larger stainless stockpot, bring 2 gallons of water to 160°F and turn off heat.

Put the crushed grains in the grain bag:

	½ lb Crystal 10L Malt	
	2 ½ lb German Pilsner Malt	

Soak the grains in the hot water and maintain approx. 155°F for 45 minutes. After soaking the grains, dunk the grain bag in and out of the water and then completely lift the grain bag out. Place a strainer over the stockpot and then put the grain bag into the strainer. Pour 170°F water evenly over the grain bag using approx. 1 quart of water per 2 lb. of grain. Allow the bag to drip (without squeezing) until nearly all of the water has dripped out, then discard the grains, add 1 gallon of water and return to heat until boiling.

Turn off the heat once again and move the stockpot to a cool burner.

Add the malt extract and any additional sugars listed below:

1 lb Rice Syrup Solids	3 lb Pale Extract	
	1 lb Pilsen Light DME	

Stir constantly to dissolve the malt extract. Return heat to the mixture once dissolved, stirring occasionally. The mixture now contains a lot of sugar and can burn if not stirred. Heat the mixture to boiling. When the mixture reaches boiling, it can rise very rapidly and boil over. At this time, reduce heat to control the rising foam. Once the boil is under control, adjust the heat to a good rolling boil without boiling over.

Add the bittering hops and set your timer for: 60 Minutes

	4 HBU Pack	
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***Add the flavor hops for the last: 15 Minutes**

	¼ oz Saaz	
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Add the aroma hops for the last: 0 Minutes




	None	
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FOR YEAST FUEL AND/OR A WHIRLFLOC TABLET ADD AT 15 MINUTES LEFT IN THE BOIL

Once the boil time has elapsed since the bittering hops were added, remove the wort from the heat and cool down quickly to 80°F. A sink full of water with ice in it works well. You may need to change the water a couple of times because it will warm up quickly. Ideally the wort should be cooled to 80°F within 15-20 minutes. You may want to use a wort chiller to speed up the process. Once the wort has cooled to 80°F, pour this mixture into the sanitized primary fermenter and add cool water to make 5 ¼ gallons. Vigorously stir the wort to make sure the sugars are well mixed with the added water. Check the specific gravity of the wort using a hydrometer. Follow the instructions included with the hydrometer. The hydrometer readings will determine the alcohol content of the beer and allow you to troubleshoot if there is a problem.

The original specific gravity should be approximately: **1.048**

Recommended Yeast:

White Labs	Wyeast	Dry Yeast
American Pilsner Lager 840 82-840 	Bohemian Lager 2124 67-2124 	SafLager S23 24-2354 

Pitchable Liquid Yeast: Let the yeast warm up to 72 - 78 degrees F. The longer the yeast sets at this temperature range, up to 24 hours, the faster the beer will start fermenting. Shake the yeast container well and pour into the wort and stir/aerate well.

Dry Yeast: Sprinkle the yeast around the top of the wort and stir well.

Cold Fermentation: Put the lid on the fermenter with the airlock installed (fill airlock 1/3 with water). After 12-36 hours this mixture will begin to churn and produce CO₂. Once you see signs of fermentation, slowly cool temperature of the wort to 50° - 55°F (about 1° per hour). If you do not see any activity after 24 hours, then remove the lid and vigorously stir the wort with a sanitized spoon. If after another 24 hours you do not see any fermentation, please call us. After 10 days since the wort started fermenting, the mixture will calm down and the excess proteins will settle at the bottom of the primary fermenter. At this time, raise the temperature to 60° - 70°F for 2 days to improve flavor. Check the specific gravity to make sure it is within 3-4 points of the FG and then carefully move the fermenter full of beer to a counter top. Be careful not to disturb the sediment

If the recipe calls for dry hopping, add these hops to the sanitized secondary fermenter at this point:

	None	
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You can move the primary fermenter several hours before you intend to transfer, so the sediment has a chance to resettle to the bottom of the primary fermenter. Carefully siphon the beer into the sanitized secondary fermenter. Move the airlock from the primary fermenter to the secondary fermenter. Make sure the airlock has enough water. Slowly cool the beer (over 2 days) down to about 40°F for 3-4 weeks. If the beer has not cleared, you can add Claro K.C. finings for beer.

If you have to ferment at room temperature follow these instructions:

Put the lid on the fermenter with the airlock installed (fill airlock 1/3 with water). After 12-36 hours this mixture will begin to churn and produce CO₂. After 5-7 days since the wort started fermenting, the mixture will calm down and the excess proteins will settle at the bottom of the primary fermenter. At this time, carefully move the fermenter full of beer to a counter top. Be careful not to disturb the sediment on the bottom. You can move the primary fermenter several hours before you intend to transfer, so the sediment has a chance to resettle to the bottom of the primary fermenter. Carefully siphon the beer into the sanitized secondary fermenter. Move the airlock from the primary fermenter to the secondary fermenter. Make sure the airlock has enough water. Let the beer clarify in the secondary for 5-7 days. If the beer has not cleared in 7 days you can add Claro K.C. finings for beer.

Check the specific gravity of the beer using the hydrometer.

The final specific gravity should be approximately: **1.011**

The original gravity minus the final gravity multiplied by 131 will give you the alcohol content of your beer.

Bottling the Beer: SANITIZE EVERYTHING FIRST!!!

Make sure everything is clean to the eye and sanitize. Carefully move the secondary fermenter full of beer to a counter top. Be careful not to disturb the sediment on the bottom. You can move the carboy several hours before you intend to bottle, so the sediment has a chance to resettle to the bottom of the fermenter. Next you need to put 2 cups of water into a saucepan and bring to a boil. Then add the priming sugar and boil for another minute. Remove from heat and let cool to 80°F or cooler.

Pour the cooled sugar water into the plastic bucket (primary fermenter), and then transfer the beer from the secondary fermenter into the bucket. Siphon the beer into the bucket trying very hard not to disturb the sediment on the bottom of the fermenter. This will mix the sugar water and beer thoroughly. The yeast in the beer will ferment the priming sugar and carbonate the bottled beer.

Flavoring to add before bottling

No Flavoring

Once the beer is in the bucket, place the bucket on the counter top. Attach the bottle filler to the end of the tubing. Siphon the beer and use the filler to put beer in the bottles. Fill the bottles to the top. When you remove the filler, the level of beer will be appropriate for capping. Proceed to cap the bottles and store in a dark place at room temperature. Chill the beer when you are ready to drink it.

This handcrafted beer will taste best after 3 weeks or more of storage.