AUSTIN HOMEBREW SUPPLY

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Terrapin Rye Pale Ale (6D) - All Grain

 # 02969

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 your kettle heat your strike water. Heat 1.25 qt. of water per lb. of grain to 20°F higher than desired mash temperature. Ideal mash temperature is 150°F

Mix Grain with strike water very well, removing all dough balls, and measure temperature.

1 lb Rye Malt	**8 ½ lb 2-Row Malt**	**½ lb Victory Malt**
6 oz Honey Malt	**1 lb Munich Malt**	

Traditional Method: Mash the grains in the hot water for 60 minutes. Take temperature readings every ½ hour to ensure a stable starch conversion. Begin heating sparge water. Heat 5 gallons of water to 175°F, and put in hot liquor tank. Once mash is complete begin to recirculate the wort by drawing it off the bottom and returning it to the top of the mash-tun, while not disturbing the grain near the false bottom. Recirculate for 10-15 minutes until wort is clear, and free of grain husks. Begin the sparge and runoff into the kettle at the same rate. A rate of 12 minutes per gallon is ideal, be sure to keep 1 –2 inches of water on top of the grain bed. Once sparge water is used or you have reached 6.25 gallons begin heating for boil. Don't run off more than 6.25 gallons of wort!

BIAB Method: Once at strike temperature line your kettle with the BIAB bag, folding the edges over the rim of the kettle. Slowly pour the grains into the bag, stirring continuously to break up any clumps. Stir and check the temp. to make sure you are between 150-160°F, this is the mash temp. Cover the kettle and mash for 60 minutes, check the temp. regularly, adjust as necessary. After mashing carefully remove the grains with bag from the kettle. In another vessel rinse grains with 170 °F water and let drain for 10-15 minutes (Add only enough water so that the total between both vessels is no more than 6.25 gallons. After draining add this mixture back to your kettle and heat to boil

Add additional sugars listed below, once wort comes to a boil:

	None	

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

	5 HBU Pack	

***Add the flavor hops for the last: 30 Minutes**

	1 oz Fuggle	

Add the flavor hops for the last: 15 Minutes

	1 oz Kent Golding	

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 80ºF. 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 80ºF within 15-20 minutes. You may want to use a wort chiller to speed up the process. Once the wort has cooled to 80ºF, pour this mixture into the sanitized primary fermenter and add cool water to make 5 ¼ gallons. 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: ***1.055***

Recommended Yeast:

White Labs	Wyeast	Dry Yeast
California Ale 001 82-001	**American Ale 1056** 67-1056	**SafAle US-05** 24-2353

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.

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. This is the yeast vigorously eating the sugar in the wort, expelling unwanted proteins and fermenting the mixture into alcohol. 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 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, 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 on the bottom.

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

	2 oz Amarillo	

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: ***1.013***
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.