



TOAST

HERE'S TO CHANGE

HOMEBREW RECIPE

Pale Ale

What you'll need...

For the mash

Pale Malt	3.5kg
Dry crumbed bread	1.5kg
CaraMalt	150g
Munich malt	150g

For the boil

German Hallertau	5g
Tradition hops	
Cascade hops	37g
Centennial hops	20g
Bramling hops	25g
Protofloc	1 tsp

To ferment

Cascade hops	60g
Bramling Cross hops	35g
Safale US-05	11.5g
rehydrated yeast	

Beer Style: Pale Ale | Original Gravity: 1.048 | Yield: 25l

FROM BREAD TO BEER

Brew a planet-saving Pale Ale with surplus bread

1 SLICE, DRY AND CRUSH THE BREAD

1

Slice your surplus bread and dry it in an oven at 90°C for about 1h. Once the bread is dry, coarsely crush to the size of large croutons. Don't crush to powder otherwise you're likely to get a stuck mash. Tip: you can save up your bread by freezing it until you have enough to brew with.



2 MASH

2

Steep your grains (1.5kg bread and 3.8kg malted barley) in 15.7L of water at 67°C and mix. Cover and leave for 60 minutes. The naturally occurring enzymes in the malt will convert the starches into simple sugars.

3 SPARGE AND LAUTER

3

Drain the liquid from the bottom of the mash tun whilst rinsing the grains with 78°C water from the top to extract additional sugars. Sparge until you've reached 25L. Tip: use a watering can or colander so that the water is distributed in a spray. Don't be tempted to push it through the wet grains - you'll get unwanted tannin tastes.



4 BOIL AND ADD HOPS

4

Bring the wort to a boil. Add 5g of German Hallertau Tradition hops immediately at 90 minutes. At 15 minutes add 1 tsp Protofloc (Irish Moss), to make a brighter tasting wort. At 5 minutes add 12g Cascade hops and 10g Centennial hops. As you take the wort off the boil add the final hops - 25g Cascade, 10g Centennial and 25g Bramling Cross.

5 COOL, FERMENT AND CONDITION

5

Allow the wort to cool to 20°C. Add a 11.5g sachet of Safale US-05 rehydrated yeast and leave it to ferment. Try to keep it at 18°C for 7 days. After five days, add another 60g Cascade hops and 35g Bramling Cross hops. Siphon the beer into sterile bottles, seal and leave in a cool, dark place (at around 12°C) for two weeks. Pop open and enjoy.



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