



# 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

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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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