

# Improvised Pale Ale

English IPA (12 C)

**Type:** All Grain  
**Batch Size:** 20.00 l  
**Boil Size:** 28.92 l  
**Boil Time:** 90 min  
**End of Boil Vol:** 22.92 l  
**Final Bottling Vol:** 19.00 l  
**Fermentation:** Ale, Single Stage

**Date:** 22 Oct 2017  
**Brewer:** Dutch Courage Brews  
**Asst Brewer:**  
**Equipment:** Bulldog Brewer  
**Efficiency:** 70.00 %  
**Est Mash Efficiency:** 77.0 %  
**Taste Rating:** 30.0



**Taste Notes:**

## Ingredients

Amt	Name	Type	#	%/IBU
5.29 kg	Pilsner (2 Row) Bel (3.9 EBC)	Grain	1	85.9 %
0.87 kg	Caramel/Crystal Malt - 30L (59.1 EBC)	Grain	2	14.1 %
38.97 g	Challenger [7.50 %] - Boil 90.0 min	Hop	3	32.8 IBUs
38.97 g	Hallertauer Mittelfrueh [4.00 %] - Boil 30.0 min	Hop	4	12.6 IBUs
50.00 g	Challenger [7.50 %] - Boil 0.0 min	Hop	5	0.0 IBUs
10.00 g	Hallertauer Mittelfrueh [4.00 %] - Boil 0.0 min	Hop	6	0.0 IBUs
1.0 pkg	US West Coast (Mangrove Jack's #M44)	Yeast	7	-

## Gravity, Alcohol Content and Color

**Est Original Gravity:** 1.065 SG  
**Est Final Gravity:** 1.013 SG  
**Estimated Alcohol by Vol:** 6.9 %  
**Bitterness:** 45.4 IBUs  
**Est Color:** 17.9 EBC

**Measured Original Gravity:** 1.060 SG  
**Measured Final Gravity:** 1.010 SG  
**Actual Alcohol by Vol:** 6.6 %  
**Calories:** 562.7 kcal/l

## Mash Profile

**Mash Name:** Dutch Courage Mash  
**Sparge Water:** 16.61 l  
**Sparge Temperature:** 75.0 C  
**Adjust Temp for Equipment:** TRUE  
**Est Mash PH:** 5.63  
**Measured Mash PH:** 5.20

**Total Grain Weight:** 6.16 kg  
**Grain Temperature:** 22.0 C  
**Tun Temperature:** 22.0 C  
**Target Mash PH:** 5.20  
**Mash Acid Addition:**  
**Sparge Acid Addition:**

## Mash Steps

Name	Description	Step Temperature	Step Time
Mash Step1	Add 18.48 l of water at 76.7 C	67.8 C	60 min
Mash Step2 Temp	Heat to 75.6 C over 10 min	75.6 C	0 min

**Sparge:** Fly sparge with 16.61 l water at 75.0 C

**Mash Notes:**

## Carbonation and Storage

**Carbonation Type:** Bottle  
**Pressure/Weight:** 127.01 g  
**Keg/Bottling Temperature:** 21.1 C  
**Fermentation:** Ale, Single Stage  
**Fermenter:**

**Volumes of CO2:** 2.5  
**Carbonation Est:** Bottle with 127.01 g Corn Sugar  
**Carbonation (from Meas Vol):** Bottle with 2.01 g Corn Sugar  
**Age for:** 30.00 days

**Storage Temperature:** 18.3 C

## Notes

Created with BeerSmith