

## Batch 1 of Dual APA (am)

### Dates

Date Brewed:	12 May 2012	Date Racked:	12 May 2012
Date Packaged:	12 May 2012	Date Ready:	12 May 2012

### Selected Style and BJCP Guidelines

10A–American Ale–American Pale Ale

Minimum OG:	1.045 SG	Maximum OG:	1.060 SG
Minimum FG:	1.010 SG	Maximum FG:	1.015 SG
Minimum IBU:	30 IBU	Maximum IBU:	45 IBU
Minimum Color:	9.9 EBC	Maximum Color:	27.6 EBC

### Recipe Overview

Target Wort Volume Before Boil:	27.00 l	Actual Wort Volume Before Boil:	27.00 l
Target Wort Volume After Boil:	24.00 l	Actual Wort Volume After Boil:	24.00 l
Target Volume Transferred:	23.00 l	Actual Volume Transferred:	23.00 l
Target Volume At Pitching:	23.00 l	Actual Volume At Pitching:	23.00 l
Target Volume Of Finished Beer:	22.50 l	Actual Volume Of Finished Beer:	22.50 l
Target Pre-Boil Gravity:	1.046 SG	Actual Pre-Boil Gravity:	1.050 SG
Target OG:	1.051 SG	Actual OG:	1.054 SG
Target FG:	1.012 SG	Actual FG:	–No Record–
Target Apparent Attenuation::	75.9 %	Actual Apparent Attenuation:	101.7 %
Target ABV:	5.2 %	Actual ABV:	7.3 %
Target ABW:	4.1 %	Actual ABW:	5.8 %
Target IBU (using Tinseth):	35.9 IBU	Actual IBU:	34.5 IBU
Target Color (using Morey):	10.1 EBC	Actual Color:	10.1 EBC
Target Mash Efficiency:	70.0 %	Actual Mash Efficiency:	76.8 %
Target Fermentation Temp:	18 degC	Actual Fermentation Temp:	18 degC

### Fermentables

Ingredient	Amount	%	MCU	When
German Pale Ale Malt	5.000 kg	92.6 %	3.1	In Mash/Steeped
German Caramel Pils	0.300 kg	5.6 %	0.2	In Mash/Steeped
UK Dark Crystal	0.100 kg	1.9 %	2.7	In Mash/Steeped

### Hops

Variety	Alpha	Amount	IBU	Form	When
US Simcoe	14.2 %	30 g	23.2	Loose Pellet Hops	15 Min From End
US Amarillo	9.6 %	20 g	4.2	Loose Pellet Hops	5 Min From End
US Simcoe	14.2 %	20 g	6.2	Loose Pellet Hops	5 Min From End
US Amarillo	9.6 %	20 g	0.9	Loose Pellet Hops	1 Min From End
US Simcoe	14.2 %	20 g	1.3	Loose Pellet Hops	1 Min From End

## Other Ingredients

Ingredient	Amount	When
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## Yeast

White Labs WLP060–American Ale Blend

## Water Profile

Target Profile:	No Water Profile Chosen		
Mash pH:	5.2		
pH Adjusted with:	Unadjusted		

Total Calcium (ppm):	36	Total Magnesium (ppm):	14
Total Sodium (ppm):	20	Total Sulfate (ppm):	37
Total Chloride(ppm):	40	Total Bicarbonate (ppm):	106

## Mash Schedule

Mash Type:	Full Mash
Schedule Name:	Single Step Infusion (67C/152F)

Step Type	Temperature	Duration
Rest at	67 degC	60

## Mash Notes

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## Boil Notes

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## Fermentation Notes

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## Packaging Notes

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## Tasting Notes

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