

# 49: Caramel Chameleon

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 Date: 14/11/10  
 Category: 10 – American Ale  
 Subcategory: B – American Amber Ale



Kettle Volume: 7.45 gal (S.G.: 1.047)	Efficiency: 78.48%
Boil Duration: 1.75 hr	Attenuation: 75.1%
Evaporation: 1.22 gal	Evap/Hour: .7 gal
Water Volume Added: 1.0 L	
Final Volume: 6.28 gal (S.G.: 1.056)	

## Ingredients:

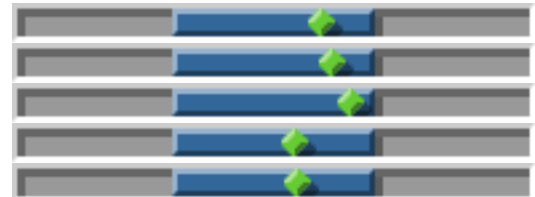
- 9.5 lb Cargill Special Pale
- 1.5 lb Cargill Munich
- 1.0 lb Medium Crystal
- 0.5 lb Extra Dark Crystal
- 20.0 g Simcoe (12.2%) – added during boil, boiled 90 min
- 20.0 g Centennial (10.1%) – added during boil, boiled 15 min
- 20.0 g Willamette (4.7%) – added during boil, boiled 15 min
- 20.0 g Centennial (10.1%) – steeped after boil
- 20.0 g Willamette (4.7%) – steeped after boil
- 27.0 g Centennial (10.1%) – added dry to primary fermenter
- 1.0 ea White Labs WLP051 California Ale V

### Water:

- 9.0 gal Distilled Water
- 2.0 g Gypsum (Calcium Sulfate)
- 2.0 g Calcium Chloride (Calcium Chloride (anhydrous))
- 3.0 g Calcite (Calcium Carbonate)
- 3.0 g Baking Soda ()
- 3.0 g Epsom Salts (Magnesium Sulfate)

## Style:

	Recipe	Guideline
Original Gravity:	1.056	1.045 – 1.060
Terminal Gravity:	1.014	1.010 – 1.015
Color:	16.26 °SRM	10.0 – 17.0
Alcohol:	5.53%	4.5% – 6.2%
Bitterness:	34.4	25.0 – 40.0



## Analysis:

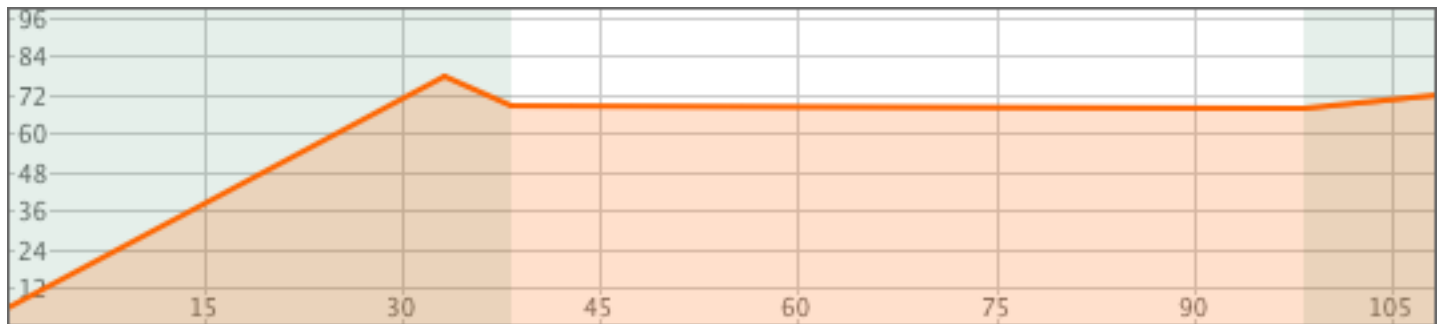
	Apparent	Real	Weight	Calories
Original Extract:	13.82 °P	13.82 °P	Alcohol: 20.77 g	143.34 kcal
Attenuation:	75.1%	60.1%	Carbs: 25.96 g	98.66 kcal
Terminal Extract:	3.57 °P	5.51 °P	Protein: 1.82 g	7.27 kcal
% Alcohol:	5.53% ABV	4.33% ABW		Total: 249.27 kcal

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**Schedule:**

Ambient Air: 6 °C  
Source Water: 5 °C  
Elevation: 9230 ft

	Elapsed	Thickness	Final Temp	Available
<b>38.3 min Mash In</b> <i>Liquor: 5.25 gal</i> <i>Strike: 78.65 °C</i> <i>Target: 69.0 °C</i>	00:38:18	3.51 L/kg	69.0 °C	3.64 gal
<b>60.0 min Rest</b> <i>Rest: 60.0 min</i> <i>Final: 154.9 °F</i>	01:38:18	3.51 L/kg	68.3 °C	3.64 gal
<b>10.0 min Batch Sparge</b> <i>Sparge #1</i> <i>Volume: 3.63 gal</i> <i>Temperature: 85 °C</i> <i>Duration: 10.0 min</i> <i>Total Runoff: 7.36 gal</i>	01:48:18	0.0 L/kg	72.8 °C	0.0 gal



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**Carbonation:**

**Natural Conditioning**  
Beer Temp: 68.0 °F  
Priming Agent Rate: 4.02 g/L  
Priming Agent Mass: 140.56 g  
Volumes CO2: 2.4

**Forced Carbonation**  
Beer Temp: 44.0 °F  
Pressure: 13.2 PSI  
Volumes CO2: 2.4

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**Volume Adjustments:**

-100 mL Kettle  
-.25 gal Fermenter

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**Notes:**

Boiloff MUCH less than expected; increased length of boil to compensate. "Water added" accounts for 1.1 L starter. Flameout hops left in for whirlpool/chill (45 min). Long contact time due to leaf hops slowing pump. Accidentally chilled to 50°F, aerated 15 min, pitched yeast. Fermented at 64°F ambient and allowed to free-rise; peaked at 69°F after 2 days, then held at 68°F until day 7. Dry-hopped 7 days in primary at 59°F.