

# The WIZARDs Recipe Library

## The Empire Strikes Back ESB

Created by Don Levey on 06/30/2007

Brew Target Statistics							
<b>Style</b>	Extra Special/Strong Bitter (English Pale Ale)	<b>Efficiency</b>	68.07902880266575 %	<b>Pre-boil Volume</b>	6.96 gallons US	<b>OG</b>	1.052
<b>IBU</b>	39.4	<b>Mash Ratio</b>	1.25 qt/lb	<b>Post-boil Volume</b>	5.46 gallons US	<b>FG</b>	1.010
<b>SRM</b>	11.1	<b>Mash Time</b>	60 min	<b>Boil Time</b>	90 min	<b>Attenuation</b>	80.79368650217711 %
<b>ABV</b>	5.5 %	<b>Liquor Temp. Loss</b>	0.0 F	<b>Evaporation</b>	1 gallons		

Fermentables					
Name	Quantity	Percent	Extract Potential	SRM	Method
Pale Ale	10.5 lb	89 %	1.036/lb/gal	3	Mash
American Crystal 40L	0.4 lb	3.4 %	1.034/lb/gal	40	MashSteep
American Crystal 120L	0.3 lb	2.5 %	1.033/lb/gal	120	MashSteep
American Special Roast	0.2 lb	1.7 %	1.033/lb/gal	40	Mash
Belgian Aromatic	0.4 lb	3.4 %	1.030/lb/gal	25	Mash
<b>Totals:</b>	<b>11.8 pounds</b>	<b>100%</b>	<b>1.052</b>	<b>11.1</b>	

Mash Schedule						
Type	Start Temp	End Temp	Method	Ramp Minutes	Step Minutes	Instructions
alpha	152 F	152 F	infusion	0	60	Mash in with 3.7 gallons US of water at 164.9 F
sparge	170 F	170 F	fly	0	60	Sparge with 4.9 gallons US at 170.0F to collect 7.0 gallons US

Flavor Addition Schedule					
Name	Quantity	Form	Alpha	Stage	Time
E. Kent Goldngs	1.5 oz	Pellet	5.8	Boil	60
E. Kent Goldngs	0.75 oz	Pellet	5.8	Boil	20

E. Kent Goldngs	0.75 oz	Pellet	5.8	Boil	1
<b>Hop totals:</b>	<b>3.0 ounces</b>	<b>39.4</b>			

### Fermentation Schedule

<b>Yeast</b>	WLP002 English Ale Yeast	<b>Fermentation temperature</b>
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