



Waka Waka

18B - American Pale Ale



GRAIN BILL

TOTAL: 7.45 KG

Amt	Name	%/IBU
<input type="checkbox"/> 7.00 kg	Pale Malt, 2-Row (Rahr) (1.8 SRM)	94.0 %
<input type="checkbox"/> 0.45 kg	Crystal 40, 2-Row, (Great Western) (40.0 SRM)	6.0 %

MASH

STEPS

Name	Description	Temp	Time
<input type="checkbox"/> Mash In	Add 28.23 l of water at 165.1 F	150.0 F	75 min

SALT ADDITIONS

Amt	Name
<input type="checkbox"/> 4.00 g	Gypsum (Calcium Sulfate) (Mash 60.0 mins)
<input type="checkbox"/> 2.00 ml	Lactic Acid (Mash 60.0 mins)
<input type="checkbox"/> 1.70 g	Calcium Chloride (Mash 60.0 mins)
<input type="checkbox"/> 0.80 g	Epsom Salt (MgSO4) (Mash 60.0 mins)

SPARGE PREP

☐ Fly sparge with 23.23 l water at 168.0 F

BOIL STEPS

Amt	Name	%/IBU
<input type="checkbox"/> 28.00 g	Hallertau Blanc [7.20 %] - Boil 60.0 min	12.7 IBUs
<input type="checkbox"/> 3.20 g	Gypsum (Calcium Sulfate) (Boil 60.0 mins)	-
<input type="checkbox"/> 1.40 g	Calcium Chloride (Boil 60.0 mins)	-
<input type="checkbox"/> 0.70 g	Epsom Salt (MgSO4) (Boil 60.0 mins)	-
<input type="checkbox"/> 28.00 g	Wakatu (Hallertau Aroma) [7.50 %] - Boil 20.0 min	8.0 IBUs
<input type="checkbox"/> 1.00 Items	Whirlfloc Tablet (Boil 15.0 mins)	-

STEEP HOPS

Amt	Name	%/IBU
<input type="checkbox"/> 28.00 g	Wakatu (Hallertau Aroma) [7.50 %] - Steep/Whirlpool 15.0 min 3.3 IBUs	

YEAST PITCH

Amt	Name
<input type="checkbox"/> 2.0 pkg	Safale American (DCL/Fermentis #US-05) [50.28 ml]

FINAL

Pre-Boil Start	Boil Start	OG	Volume
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		11.675 Plato	Liters

MASH DATA

Mash In Time	Mash Temperature	Mash PH
<input type="text"/>	<input type="text"/>	<input type="text"/>
Time	F°	PH

SPARGE DATA

Vorlauf Start Time	Sparge Start Time	Sparge Stop Time
<input type="text"/>	<input type="text"/>	<input type="text"/>
Time	Time	Time

PRE BOIL CALCULATION

Pre Boil Volume	Pre Boil Gravity	Weight of Sugar
<input type="text"/>	×	<input type="text"/>
44.00 l	11.168 Plato	KG
Weight of Sugar	Expected Gravity	Target Volume
<input type="text"/>	+ %11.675	<input type="text"/>
KG	Plato	Liters
Pre - Target Volume	Boil Off Rate	Needed Boil Duration
<input type="text"/>	+ 6.00	<input type="text"/>
Liters	Liters/Hr	Hours
Needed Boil Duration	Original Boil Duration	Additional Boil Time
<input type="text"/>	- 60	<input type="text"/>
Hours	Minutes	Minutes