

ray ipa

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **16**
- SRM **4.6**
- Style **American Wheat or Rye Beer**

Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **30.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **36.2 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **66 C**, Time **60 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **36.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) UK	5.6 kg (80%)	78 %	6
Grain	Rye Malt	0.75 kg (10.7%)	63 %	10
Grain	Briess - Carapils Malt	0.5 kg (7.1%)	74 %	3
Grain	Briess - Wheat Malt, White	0.15 kg (2.1%)	85 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Motueka	30 g	15 min	7 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	15 g	15 min	15.5 %
Dry Hop	Motueka	70 g	5 day(s)	7 %
Dry Hop	Columbus/Tomahawk/Zeus	35 g	5 day(s)	15.5 %