

qwer

- Gravity **9.5 BLG**
- ABV ---
- IBU **45**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **70 liter(s)**
- Trub loss **5 %**
- Size with trub loss **73.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **88.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **48 liter(s)**

Steps

- Temp **70 C**, Time **60 min**

Mash step by step

- Heat up **36 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **60 min** at **70C**
- Sparge using **64.5 liter(s)** of **76C** water or to achieve **88.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	8 kg (66.7%)	80 %	7
Grain	Briess - Pilsen Malt	2.5 kg (20.8%)	80.5 %	2
Grain	carahell	1.5 kg (12.5%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galaxy	30 g	60 min	14.5 %
Boil	Galaxy	30 g	20 min	14.5 %
Boil	Citra	50 g	12 min	12 %
Boil	Citra	50 g	5 min	12 %
Aroma (end of boil)	Galaxy	80 g	2 min	15 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	50 g	Fermentis