

Rye APA

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **66**
- SRM **3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **46 liter(s)**
- Trub loss **5 %**
- Size with trub loss **50.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **55.5 liter(s)**

Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **48 liter(s)**

Steps

- Temp **64 C**, Time **70 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **36 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **70 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **31.5 liter(s)** of **76C** water or to achieve **55.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	10 kg (83.3%)	80.5 %	2
Grain	Rye, Flaked	2 kg (16.7%)	78.3 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	80 g	60 min	17.6 %
Aroma (end of boil)	citra	25 g	10 min	9.5 %
Aroma (end of boil)	Citra	25 g	5 min	12 %
Aroma (end of boil)	Citra	50 g	0 min	12 %
Aroma (end of boil)	Warrior	20 g	0 min	17.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	20 g	fermentis