

ppa dla ojca

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **23**
- SRM **3.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

Steps

- Temp **70 C**, Time **60 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **9 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **60 min** at **70C**
- Keep mash **0 min** at **78C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (83.3%)	80 %	5
Grain	Oats, Flaked	0.5 kg (16.7%)	80 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	20 g	30 min	8.3 %
Aroma (end of boil)	Zula	30 g	0 min	8.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Slant	300 ml	---