

## #22 APA OZA

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **34**
- SRM **5.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **0 %**
- Size with trub loss **20 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **11.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (51.3%)	80 %	5
Grain	Viking Wheat Malt	1 kg (25.6%)	83 %	5
Grain	Biscuit Malt	0.5 kg (12.8%)	79 %	45
Grain	Rye, Flaked	0.4 kg (10.3%)	78.3 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Oktawia	15 g	60 min	7.1 %
Boil	Oktawia	15 g	60 min	7.1 %
Boil	Zula	50 g	5 min	8.3 %
Boil	Amarillo	50 g	5 min	9.5 %
Dry Hop	Oktawia	20 g	3 day(s)	7.1 %
Dry Hop	Zula	50 g	3 day(s)	8.3 %
Dry Hop	Amarillo	50 g	3 day(s)	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Lutra OYL-071	Ale	Slant	200 ml	Omega
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### Extras

Type	Name	Amount	Use for	Time
Fining	Wirflock	0.5 g	Boil	10 min
Flavor	Skórka pomarańczy	25 g	Boil	5 min