

APA festiwal

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **21**
- SRM **5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.2 liter(s)**

Steps

- Temp **67 C**, Time **65 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.8 liter(s)** of strike water to **73.5C**
- Add grains
- Keep mash **65 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (68.2%)	80 %	5
Grain	Żytni	0.7 kg (15.9%)	85 %	8
Grain	cookie	0.2 kg (4.5%)	78 %	100
Grain	Płatki owsiane	0.5 kg (11.4%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	5 g	60 min	15.5 %
Boil	Chinook	20 g	15 min	13 %
Aroma (end of boil)	Mosaic	20 g	0 min	10 %
Aroma (end of boil)	Simcoe	20 g	0 min	13.2 %
Dry Hop	Mosaic	50 g	3 day(s)	10 %
Dry Hop	Simcoe	50 g	3 day(s)	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	Fermentis