

APA

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **38**
- SRM **5.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **2 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **92 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.9 liter(s)**
- Total mash volume **23.8 liter(s)**

Steps

- Temp **55 C**, Time **20 min**
- Temp **65 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **17.9 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (75.6%)	80 %	5
Grain	Monachijski typ II Viking Malt	1 kg (16.8%)	79 %	20
Grain	Płatki owsiane błyskawiczne	0.45 kg (7.6%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	30 min	15.5 %
Boil	Amarillo	20 g	20 min	9.5 %
Boil	Citra	30 g	10 min	11.6 %
Aroma (end of boil)	Amarillo	15 g	5 min	7.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM53 Voss kveik	Ale	Slant	50 ml	FM

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	3 g	Boil	10 min

Notes

- Uwodnić mech przed dodaniem do gotowania
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