

apka2

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **38**
- SRM **4.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **49.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **60.5 liter(s)**

Mash information

- Mash efficiency **84 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **36.3 liter(s)**
- Total mash volume **47.3 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **36.3 liter(s)** of strike water to **74.1C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **77C**
- Sparge using **35.2 liter(s)** of **76C** water or to achieve **60.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	7 kg (63.6%)	80 %	5
Grain	Monachijski	2 kg (18.2%)	80 %	16
Grain	Strzegom Pszeniczny	2 kg (18.2%)	81 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Admiral	30 g	30 min	12 %
Boil	Citra	30 g	30 min	12 %
Aroma (end of boil)	Admiral	30 g	5 min	14.3 %
Aroma (end of boil)	Ahtanum	30 g	5 min	5 %
Dry Hop	Admiral	70 g	5 day(s)	14.3 %
Dry Hop	Ahtanum	70 g	5 day(s)	5 %
Dry Hop	Citra	70 g	5 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	120 ml	Fermentum Mobile

us-05	Ale	Dry	11 g	safale
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