

Apa

- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **60**
- SRM **10.6**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **70 C**, Time **15 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **70C**
- Keep mash **10 min** at **76C**
- Sparge using **11.3 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	5 kg (71.4%)	80 %	5
Grain	Platki owsiane	0.5 kg (7.1%)	85 %	3
Grain	Strzegom Karmel 150	0.5 kg (7.1%)	75 %	150
Grain	Monachijski	1 kg (14.3%)	80 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Pacific Gem	20 g	60 min	14 %
Boil	Pacific Gem	10 g	30 min	14 %
Boil	Endeavour	20 g	30 min	9.5 %
Boil	Endeavour	10 g	15 min	9.5 %
Boil	Oktawia	20 g	15 min	7.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Spice	herbata	150 g	Secondary	---