

Aaa

- Gravity **10 BLG**
- ABV **4 %**
- IBU **21**
- SRM **3.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **62 C**, Time **50 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **67.3C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **10 min** at **75C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.8 kg (84.4%)	80 %	5
Grain	Płatki owsiane	0.3 kg (6.7%)	85 %	3
Grain	Płatki orkiszowe	0.4 kg (8.9%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	zula	50 g	30 min	7.4 %
Whirlpool	izabela	50 g	10 min	5.8 %