

Apa

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **33**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **50.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **30 liter(s)**
- Total mash volume **40 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **30 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **30.6 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	8 kg (80%)	80 %	5
Grain	Płatki owsiane	1 kg (10%)	85 %	3
Grain	Strzegom Monachijski typ I	1 kg (10%)	79 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	40 g	60 min	15.5 %
Whirlpool	Cascade	50 g	0 min	6 %
Whirlpool	Citra	50 g	0 min	12 %
Dry Hop	Equinox	70 g	7 day(s)	13.1 %
Dry Hop	Cascade	40 g	7 day(s)	6 %
Dry Hop	Citra	20 g	7 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	10 g	---