

Smash

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **29**
- SRM **4.1**
- 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 **90 min**
- Evaporation rate **5 %/h**
- Boil size **24.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **24.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (100%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Oktawia	25 g	60 min	7.1 %
Aroma (end of boil)	Oktawia	25 g	15 min	7.1 %
Whirlpool	Oktawia	50 g	0 min	7.1 %
Dry Hop	Oktawia	50 g	3 day(s)	7.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	11.5 g	Fermentis