

CASCADE

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **47**
- SRM **8.5**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **70 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **20.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **70C**
- Keep mash **5 min** at **76C**
- Sparge using **18.9 liter(s)** of **76C** water or to achieve **32.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.3 kg (33.8%)	81 %	4
Grain	Pszeniczny	1 kg (14.7%)	85 %	4
Grain	Viking Pale Ale malt	3 kg (44.1%)	80 %	5
Grain	Crystal 160	0.5 kg (7.4%)	75 %	160

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	60 min	15.5 %
Boil	Cascade PL	25 g	10 min	5.2 %
Boil	Cascade PL	50 g	5 min	5.2 %
Aroma (end of boil)	Cascade PL	25 g	0 min	5.2 %
Dry Hop	Cascade PL	75 g	6 day(s)	5.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Slant	200 ml	---