

## smoked PPA

---

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **25**
- SRM **4.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **62 C**, Time **35 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **35 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (60%)	80 %	5
Grain	Viking Malt Wędzony Czereśnią	2 kg (40%)	82 %	10

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Lublin (Lubelski)	20 g	7 min	4 %
Boil	Lublin (Lubelski)	20 g	20 min	4 %
Boil	Marynka	20 g	60 min	8.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	---