

## 5 bro ever APA sesyjne

- Gravity **10 BLG**
- ABV **4 %**
- IBU **34**
- SRM **4.1**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**

### Mash step by step

- Heat up **14 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (75%)	80 %	5
Grain	Viking Wheat Malt	0.5 kg (12.5%)	83 %	5
Grain	Viking Munich Malt	0.5 kg (12.5%)	78 %	18

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	10 g	30 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	30 min	15.5 %
Aroma (end of boil)	Citra	10 g	5 min	12 %
Aroma (end of boil)	Mosaic	10 g	5 min	10 %
Dry Hop	Citra	40 g	3 day(s)	12 %
Dry Hop	Mosaic	40 g	3 day(s)	10 %

### Yeasts

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

### Extras

Type	Name	Amount	Use for	Time
Spice	Oak chips	10 g	Secondary	10 day(s)