

## barley op

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- Gravity **34.1 BLG**
- ABV ---
- IBU **98**
- SRM **40**
- Style **American Barleywine**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **180 min**
- Evaporation rate **10 %/h**
- Boil size **35.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **27 liter(s)**
- Total mash volume **40.5 liter(s)**

### Steps

- Temp **44 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **27 liter(s)** of strike water to **50C**
- Add grains
- Keep mash **15 min** at **44C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **21.6 liter(s)** of **76C** water or to achieve **35.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	12 kg (88.9%)	80 %	16
Grain	Czekoladowy	0.5 kg (3.7%)	60 %	788
Grain	Strzegom Karmel 150	1 kg (7.4%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	100 g	60 min	13.5 %
Aroma (end of boil)	Citra	100 g	15 min	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Wine	Dry	30 g	Safale

### Extras

Type	Name	Amount	Use for	Time
Flavor	płatki ryżowe	500 g	Boil	60 min