

## 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 |