

## mustasch brown ale

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **24**
- SRM **20.2**
- Style **Northern English Brown Ale**

### Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

### Steps

- Temp **67 C**, Time **70 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **18.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield | EBC  |
|-------|---------------------|----------------|-------|------|
| Grain | colorado pale base  | 4.5 kg (83.3%) | 83 %  | 6    |
| Grain | Biscuit Malt        | 0.3 kg (5.6%)  | 79 %  | 45   |
| Grain | Dark Chocolate Malt | 0.2 kg (3.7%)  | 60 %  | 1300 |
| Grain | Strzegom Karmel 300 | 0.2 kg (3.7%)  | 70 %  | 299  |
| Grain | Płatki żytnie       | 0.2 kg (3.7%)  | 85 %  | 3    |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 20 g   | 60 min | 8 %        |
| Boil    | Marynka | 30 g   | 10 min | 8 %        |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11 g   | Safale     |

### Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 5 g    | Boil    | 10 min |