

## #128 Bitter v.2

---

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **54**
- SRM **5.3**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **4 %**
- Size with trub loss **25.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.6 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.2 liter(s)**
- Total mash volume **18.2 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **14.2 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **20.5 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield  | EBC |
|-------|----------------------|----------------|--------|-----|
| Grain | Malteurop Lager      | 3.3 kg (81.5%) | 82 %   | 3   |
| Grain | Strzegom Karmel 150  | 0.25 kg (6.2%) | 75 %   | 150 |
| Grain | Malteurop Wheat      | 0.3 kg (7.4%)  | 86.8 % | 5   |
| Grain | Weyermann - Carapils | 0.2 kg (4.9%)  | 78 %   | 4   |

### Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 20 g   | 60 min | 15.5 %     |
| Boil    | Columbus/Tomahawk/Zeus | 40 g   | 10 min | 15.5 %     |

### Yeasts

| Name                           | Type | Form  | Amount | Laboratory |
|--------------------------------|------|-------|--------|------------|
| Wyeast-1469 West Yorkshire Ale | Ale  | Slant | 200 ml | ---        |