

#139 Bitter v.3

- Gravity **10 BLG**
- ABV **4 %**
- IBU **60**
- SRM **3.5**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **4 %**
- Size with trub loss **25 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.6 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 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 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 **19.6 liter(s)** of **76C** water or to achieve **29.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|----------------|--------|-----|
| Grain | Malteurop Lager | 3.5 kg (87.3%) | 82 % | 3 |
| Grain | Karmelowy Czerwony | 0.21 kg (5.2%) | 75 % | 59 |
| Grain | Malteurop Wheat | 0.3 kg (7.5%) | 86.8 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 25 g | 60 min | 15.5 % |
| Whirlpool | Nelson Sauvín | 40 g | 30 min | 10.4 % |
| Boil | Nelson Sauvín | 10 g | 10 min | 10.4 % |

Yeasts

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