

## Bitter v.1

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **35**
- SRM **7.9**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.8 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **13.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Pale Ale - Soufflet         | 3.5 kg (78.7%) | 80 %  | 5   |
| Grain | Crystal - Castle Malting    | 0.15 kg (3.4%) | 75 %  | 30  |
| Grain | Biscuit - Castle Malting    | 0.3 kg (6.7%)  | 79 %  | 45  |
| Grain | Strzegom Monachijski typ II | 0.2 kg (4.5%)  | 79 %  | 22  |
| Grain | Strzegom Karmel 150         | 0.3 kg (6.7%)  | 75 %  | 150 |

### Hops

| Use for | Name                | Amount | Time   | Alpha acid |
|---------|---------------------|--------|--------|------------|
| Boil    | Bramling Cross (UK) | 25 g   | 60 min | 6.1 %      |
| Boil    | Challenger (UK)     | 15 g   | 60 min | 5.8 %      |
| Boil    | Bramling Cross (UK) | 25 g   | 20 min | 6.1 %      |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|   |     |     |        |           |
|---|-----|-----|--------|-----------|
| Lallemand - Lalbrew<br>London English-style | Ale | Dry | 11.5 g | Lallemand |
|---|-----|-----|--------|-----------|