

## Bitter \_dept

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- Gravity **11.7 BLG**
- ABV ---
- IBU **26**
- SRM **7.1**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale           | 3 kg (66.7%)   | 79 %  | 6   |
| Grain | Strzegom Monachijski typ II | 1 kg (22.2%)   | 79 %  | 22  |
| Grain | Strzegom Bursztynowy        | 0.5 kg (11.1%) | 70 %  | 49  |

### Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | lunga   | 20 g   | 60 min | 11 %       |
| Aroma (end of boil) | Sybilla | 15 g   | 5 min  | 3.5 %      |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| pa   | Ale  | Dry  | 14 g   | ---        |