

## Bitter #34

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- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **28**
- SRM **12.1**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **70 C**, Time **60 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **20.8 liter(s)** of strike water to **76.3C**
- Add grains
- Keep mash **60 min** at **70C**
- Keep mash **2 min** at **76C**
- Sparge using **22.4 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount        | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Pale Ale Malt               | 4 kg (76.9%)  | 75 %  | 5   |
| Grain | Strzegom Monachijski typ II | 0.5 kg (9.6%) | 79 %  | 22  |
| Grain | Crystal 150                 | 0.5 kg (9.6%) | 72 %  | 150 |
| Grain | Strzegom Karmel 600         | 0.2 kg (3.8%) | 68 %  | 601 |

### Hops

| Use for | Name                  | Amount | Time   | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil    | Marynka               | 30 g   | 60 min | 10 %       |
| Boil    | Saaz (Czech Republic) | 30 g   | 10 min | 4.5 %      |

### Yeasts

| Name                     | Type | Form  | Amount  | Laboratory |
|--------------------------|------|-------|---------|------------|
| Danstar - London ESB Ale | Ale  | Slant | 2000 ml | Danstar    |