

## Bitter #1

- Gravity **13.1 BLG**
- ABV ---
- IBU **27**
- SRM **9.4**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **3 %/h**
- Boil size **40.4 liter(s)**

### Mash information

- Mash efficiency **74 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.3 liter(s)**
- Total mash volume **36.4 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **5 min**

### Mash step by step

- Heat up **27.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **75C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **40.4 liter(s)** of wort

### Fermentables

| Type  | Name                          | Amount        | Yield | EBC |
|-------|-------------------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt          | 4 kg (44%)    | 80 %  | 5   |
| Grain | Strzegom Wiedeński            | 4 kg (44%)    | 79 %  | 14  |
| Grain | Strzegom Karmel<br>150        | 0.6 kg (6.6%) | 75 %  | 150 |
| Grain | Wędzony bukiem<br>Viking Malt | 0.5 kg (5.5%) | 80 %  | 10  |

### Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | East Kent Goldings | 80 g   | 60 min | 4.6 %      |
| Boil    | East Kent Goldings | 20 g   | 10 min | 4.6 %      |
| Boil    | Lomik              | 15 g   | 10 min | 5 %        |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 23 g   | Fermentis  |

### Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|        |          |     |      |        |
|--------|----------|-----|------|--------|
| Fining | Whirfloc | 1 g | Boil | 15 min |
|--------|----------|-----|------|--------|