

# Bitter

- Gravity **9.5 BLG**
- ABV **3.7 %**
- IBU **22**
- SRM **6.8**
- 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 **30 min**
- Evaporation rate **15 %/h**
- Boil size **24.7 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **4.2 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **19.8 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **10 min** at **78C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **24.7 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3 kg (78.9%)   | 80 %  | 5   |
| Grain | Płatki owsiane       | 0.5 kg (13.2%) | 60 %  | 3   |
| Grain | Strzegom Karmel 150  | 0.3 kg (7.9%)  | 75 %  | 150 |

## Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | Challenger         | 25 g   | 30 min | 8.3 %      |
| Boil    | East Kent Goldings | 25 g   | 5 min  | 3.6 %      |

## Yeasts

| Name          | Type | Form   | Amount | Laboratory |
|---------------|------|--------|--------|------------|
| Lutra OYL-071 | Ale  | Liquid | 500 ml | Omega Labs |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 5 g    | Boil    | 15 min |