

Bitter

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **28**
- SRM **3.9**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **28.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------|--------------|-------|-----|
| Grain | pilzneński lager Malteurop | 4.5 kg (90%) | 80 % | 4 |
| Grain | Carahell | 0.3 kg (6%) | 77 % | 26 |
| Grain | Płatki owsiane opiekane | 0.2 kg (4%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|--------------------|--------|--------|------------|
| Boil | lunga | 25 g | 60 min | 10 % |
| Boil | East Kent Goldings | 15 g | 15 min | 5.1 % |
| Whirlpool | East Kent Goldings | 15 g | 0 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------|------|--------|---------|------------|
| WLP004 - Irish Ale Yeast | Ale | Liquid | 1000 ml | White Labs |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------------|--------|---------|--------|
| Fining | whirlfloc t | 0.5 g | Boil | 10 min |