

## Grześ ale

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **3.7**

### 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 **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount      | Yield | EBC |
|-------|---------------------|-------------|-------|-----|
| Grain | Viking Pilsner malt | 5 kg (100%) | 82 %  | 4   |

### Hops

| Use for             | Name               | Amount | Time   | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil                | Magnat             | 20 g   | 60 min | 11.8 %     |
| Aroma (end of boil) | East Kent Goldings | 20 g   | 10 min | 5.1 %      |

### Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale  | Dry  | 11 g   | ---        |