

## 13. Stout

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **47**
- SRM **11.1**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **20.2 liter(s)**

### Steps

- Temp **68 C**, Time **75 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **15.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **75 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **21.6 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount          | Yield | EBC |
|-------|--------------------------------|-----------------|-------|-----|
| Grain | Maris Otter Crisp              | 4 kg (79.1%)    | 83 %  | 6   |
| Grain | Brown Malt (British Chocolate) | 0.3 kg (5.9%)   | 70 %  | 128 |
| Grain | Chocolate Malt (UK)            | 0.036 kg (0.7%) | 73 %  | 887 |
| Grain | Abbey Malt Weyermann           | 0.22 kg (4.4%)  | 75 %  | 45  |
| Grain | Weyermann Specjal W            | 0.2 kg (4%)     | 68 %  | 300 |
| Grain | Płatki owsiane                 | 0.1 kg (2%)     | 85 %  | 3   |
| Grain | płatki jęczmienne              | 0.2 kg (4%)     | 80 %  | 3   |

### Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 25 g   | 60 min | 15.5 %     |
| Boil                | Kent Goldings          | 20 g   | 35 min | 5.5 %      |
| Aroma (end of boil) | East Kent Goldings     | 14 g   | 5 min  | 5.1 %      |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |