

stout

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **37**
- SRM **29.2**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **26.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.3 liter(s)**
- Total mash volume **20.9 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **75 C**, Time **1 min**

Mash step by step

- Heat up **16.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **1 min** at **75C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|------|
| Grain | Simpsons - Maris Otter | 4 kg (86%) | 81 % | 6 |
| Grain | Weyermann - Chocolate Rye | 0.1 kg (2.2%) | 20 % | 493 |
| Grain | Palony jęczmień Weyermann | 0.43 kg (9.2%) | 55 % | 1000 |
| Grain | Carafa II | 0.12 kg (2.6%) | 70 % | 812 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|------------|---------------------|--------|--------|------------|
| First Wort | Chinook PL | 30 g | 60 min | 8.5 % |
| Boil | Hallertau Tradition | 40 g | 10 min | 4.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | --- |

Extras

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