

## Dry stout

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **37**
- SRM **32.1**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **15.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.7 liter(s)**
- Total mash volume **12.4 liter(s)**

### Steps

- Temp **65 C**, Time **70 min**
- Temp **70 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **9.7 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **70 min** at **65C**
- Keep mash **10 min** at **70C**
- Keep mash **0 min** at **76C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

### Fermentables

| Type  | Name                              | Amount         | Yield | EBC  |
|-------|-----------------------------------|----------------|-------|------|
| Grain | Castle malting - Maris Otter      | 1.8 kg (65.2%) | 81 %  | 6    |
| Grain | bestmalz Wiedeński                | 0.4 kg (14.5%) | 79 %  | 10   |
| Grain | Płatki owsiane                    | 0.2 kg (7.2%)  | 60 %  | 3    |
| Grain | Jęczmień palony                   | 0.16 kg (5.8%) | 55 %  | 985  |
| Grain | Viking Czekoladowy ciemny         | 0.1 kg (3.6%)  | 67 %  | 900  |
| Grain | wyermann - Pszeniczny Czekoladowy | 0.1 kg (3.6%)  | 73 %  | 1200 |

### Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | El Dorado | 14 g   | 60 min | 13.8 %     |