

## Stout z resztek :)

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **35**
- SRM **38.7**
- Style **Dry Stout**

### 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 **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **66 C**, Time **5 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **16.2 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **5 min** at **66C**
- Keep mash **60 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount         | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt       | 3.3 kg (61.2%) | 80 %  | 5   |
| Grain | Strzegom Monachijski typ I | 0.5 kg (9.3%)  | 79 %  | 16  |
| Grain | Jęczmień palony            | 0.4 kg (7.4%)  | 55 %  | 985 |
| Grain | Strzegom Czekoladowy jasny | 0.3 kg (5.6%)  | 68 %  | 400 |
| Grain | Carafa II                  | 0.14 kg (2.6%) | 70 %  | 812 |
| Grain | Strzegom Karmel 150        | 0.25 kg (4.6%) | 75 %  | 150 |
| Grain | Strzegom Karmel 300        | 0.25 kg (4.6%) | 70 %  | 299 |
| Grain | Special W                  | 0.25 kg (4.6%) | 73 %  | 300 |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 42 g   | 60 min | 8 %        |

### Yeasts

| <b>Name</b> | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale         | Dry         | 11.5 g        | ---               |