

## Stout\_v10 #103

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **60**
- SRM **36.4**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **19.8 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **17.2 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **71.6 %**
- Liquor-to-grist ratio **3.28 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **26.1 liter(s)**

### Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **7 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **74.2C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount          | Yield  | EBC  |
|-------|----------------------------------|-----------------|--------|------|
| Grain | Mep©Ale                          | 3 kg (49.2%)    | 82.1 % | 5.5  |
| Grain | Viking - monachijski I           | 1.5 kg (24.6%)  | 79 %   | 16   |
| Grain | Viking - monachijski II          | 0.518 kg (8.5%) | 78 %   | 22   |
| Grain | Chateau - Cara Gold              | 0.26 kg (4.3%)  | 78 %   | 120  |
| Grain | Viking - karmelowy 300           | 0.3 kg (4.9%)   | 73 %   | 300  |
| Grain | Fawcett - czekoladowy pszeniczny | 0.164 kg (2.7%) | 72.7 % | 1000 |
| Grain | Viking - czekoladowy jęczmienny  | 0.15 kg (2.5%)  | 67 %   | 900  |
| Grain | Wyermann - Carafa II special     | 0.2 kg (3.3%)   | 65 %   | 1150 |

### Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | Marynka    | 35 g   | 60 min | 8.8 %      |
| Aroma (end of boil) | Chinook US | 30 g   | 10 min | 12.8 %     |

|                                                            |                       |       |       |     |
|------------------------------------------------------------|-----------------------|-------|-------|-----|
| Aroma (end of boil)                                        | Sybilla szyszka mokra | 100 g | 5 min | 6 % |
| 400 gr mokrej szyszki (mrożonej), ekwiwalent 100 gr suchej |                       |       |       |     |

## Yeasts

| Name                        | Type | Form  | Amount | Laboratory       |
|-----------------------------|------|-------|--------|------------------|
| FM54 Gorączka kalifornijska | Ale  | Slant | 175 ml | Fermentum Mobile |
| gęstwa 15-dniowa            |      |       |        |                  |

## Extras

| Type        | Name                | Amount | Use for | Time   |
|-------------|---------------------|--------|---------|--------|
| Water Agent | gips                | 1.5 g  | Mash    | ---    |
| Water Agent | węglan wapnia       | 7 g    | Mash    | ---    |
| Water Agent | sól epsom           | 1 g    | Mash    | ---    |
| Water Agent | kwask mlekowy [ml]  | 3.11 g | Mash    | ---    |
| Water Agent | chlorek wapnia [ml] | 0 g    | Mash    | ---    |
| Fining      | mech irlandzki      | 3 g    | Boil    | 10 min |