

## Stout\_v13 #128

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **49**
- SRM **32.6**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **19.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **18.8 %/h**
- Boil size **24.9 liter(s)**

### Mash information

- Mash efficiency **82.9 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **7 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **24.9 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount         | Yield  | EBC  |
|-------|----------------------------------|----------------|--------|------|
| Grain | Pale Ale - viking                | 2.6 kg (52.1%) | 80 %   | 5.5  |
| Grain | monachijski I - viking           | 1.15 kg (23%)  | 78 %   | 16   |
| Grain | monachijski II - viking          | 0.55 kg (11%)  | 78 %   | 22   |
| Grain | karmelowy 300 - viking           | 0.3 kg (6%)    | 73 %   | 300  |
| Grain | czekoladowy pszeniczny - fawcett | 0.2 kg (4%)    | 72.7 % | 1050 |
| Grain | Jęczmień palony - viking         | 0.08 kg (1.6%) | 55 %   | 985  |
| Grain | Carafa III special - weyer mann  | 0.11 kg (2.2%) | 65 %   | 1400 |

### Hops

| Use for                                                   | Name                  | Amount | Time   | Alpha acid |
|-----------------------------------------------------------|-----------------------|--------|--------|------------|
| Boil                                                      | Marynka               | 30 g   | 60 min | 8 %        |
| Aroma (end of boil)                                       | Sybilla szyszka mokra | 60 g   | 10 min | 6 %        |
| 240 gr mokrej szyszki (mrożonej), ekwiwalent 60 gr suchej |                       |        |        |            |

|                                                           |                     |      |        |     |
|-----------------------------------------------------------|---------------------|------|--------|-----|
| Aroma (end of boil)                                       | Perle szyszka mokra | 30 g | 10 min | 6 % |
| 120 gr mokrej szyszki (mrożonej), ekwiwalent 30 gr suchej |                     |      |        |     |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 150 ml | Fermentum Mobile |
| gęstwa 14-dniowa     |      |       |        |                  |

## Extras

| Type        | Name                | Amount | Use for  | Time   |
|-------------|---------------------|--------|----------|--------|
| Water Agent | gips                | 1.5 g  | Mash     | ---    |
| Water Agent | węglan wapnia       | 5.5 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 |
| Water Agent | kwask askorbinowy   | 0 g    | Bottling | ---    |