

## Stout\_v14 #132

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **62**
- SRM **36.6**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **18.3 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.2 liter(s)**
- Boil time **80 min**
- Evaporation rate **24.7 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **80.5 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **20.1 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 **15.1 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 **15.6 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount          | Yield  | EBC  |
|-------|----------------------------------|-----------------|--------|------|
| Grain | pale Ale - viking                | 2.6 kg (51.7%)  | 80 %   | 5.5  |
| Grain | monachijski I - viking           | 1.15 kg (22.9%) | 78 %   | 16   |
| Grain | monachijski II - viking          | 0.55 kg (10.9%) | 78 %   | 22   |
| Grain | karmelowy 300 - viking           | 0.068 kg (1.4%) | 70 %   | 300  |
| Grain | chocolate pale - fawcett         | 0.308 kg (6.1%) | 70 %   | 625  |
| Grain | czekoladowy jęczmienny - viking  | 0.1 kg (2%)     | 67 %   | 900  |
| Grain | palony jęczmień - viking         | 0.08 kg (1.6%)  | 73 %   | 1000 |
| Grain | czekoladowy pszeniczny - fawcett | 0.062 kg (1.2%) | 72.7 % | 1050 |
| Grain | carafa III special - weyermann   | 0.11 kg (2.2%)  | 65 %   | 1400 |

### Hops

| Use for | Name   | Amount | Time   | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil    | Magnum | 25 g   | 60 min | 11.5 %     |

|                                                           |                       |      |        |       |
|-----------------------------------------------------------|-----------------------|------|--------|-------|
| Aroma (end of boil)                                       | Hallertau Blanc       | 30 g | 10 min | 5.3 % |
| Aroma (end of boil)                                       | Sybilla szyszka mokra | 30 g | 10 min | 6 %   |
| 120 gr mokrej szyszki (mrożonej), ekwiwalent 30 gr suchej |                       |      |        |       |
| Aroma (end of boil)                                       | Perle szyszka mokra   | 55 g | 10 min | 6 %   |
| 220 gr mokrej szyszki (mrożonej), ekwiwalent 55 gr suchej |                       |      |        |       |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 150 ml | Fermentum Mobile |
| gęstwa 1-miesięczna  |      |       |        |                  |

## 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 | chlerek wapnia [ml] | 0 g    | Mash     | ---    |
| Fining      | mech irlandzki      | 3 g    | Boil     | 10 min |
| Water Agent | kwask askorbinowy   | 0 g    | Bottling | ---    |