

Stout_v9 #99

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **55**
- SRM **34.2**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **19.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.5 liter(s)**
- Boil time **80 min**
- Evaporation rate **14 %/h**
- Boil size **24.6 liter(s)**

Mash information

- Mash efficiency **75.2 %**
- Liquor-to-grist ratio **3.33 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25.9 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **75 C**, Time **7 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **7 min** at **75C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|-----------------|--------|------|
| Grain | Mep©Ale | 3 kg (50.1%) | 82.1 % | 5.5 |
| Grain | płatki owsiane | 0.188 kg (3.1%) | 83 % | 3 |
| Grain | Viking - monachijski I | 2.035 kg (34%) | 79 % | 16 |
| Grain | Viking - karmelowy 300 | 0.3 kg (5%) | 73 % | 300 |
| Grain | Fawcett - czekoladowy pszeniczny | 0.26 kg (4.3%) | 72.7 % | 1000 |
| Grain | Viking - palony jęczmień | 0.085 kg (1.4%) | 73 % | 1000 |
| Grain | Wyermaann - Carafa II special | 0.124 kg (2.1%) | 65 % | 1150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------------|--------|--------|------------|
| Boil | Marynka | 35 g | 60 min | 8.8 % |
| Aroma (end of boil) | Sybilla szyszka mokra | 55 g | 10 min | 6 % |

220 gr mokrej szyszki (mrożonej), ekwiwalent 55 gr suchej

| | | | | |
|---|---------------------|------|--------|-------|
| Aroma (end of boil) | Perle szyszka mokra | 25 g | 10 min | 6 % |
| 100 gr mokrej szyszki (mrożonej), ekwiwalent 25 gr suchej | | | | |
| Aroma (end of boil) | Cascade US | 15 g | 10 min | 7.1 % |

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 |