

Stout_v17 #144

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **49**
- SRM **30.8**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20.7 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.7 liter(s)**
- Boil time **70 min**
- Evaporation rate **14 %/h**
- Boil size **25.5 liter(s)**

Mash information

- Mash efficiency **87 %**
- 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 **15.5 liter(s)** of **76C** water or to achieve **25.5 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 | czekoladowy jęczmienny - viking | 0.086 kg (1.7%) | 67 % | 900 |
| Grain | Carafa III special - weyermann | 0.106 kg (2.1%) | 65 % | 1400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|---------------------|--------|--------|------------|
| Boil | Magnum | 20 g | 60 min | 11.5 % |
| Aroma (end of boil) | Perle szyszka mokra | 60 g | 10 min | 7 % |
| 240 gr mokrej szyszki (mrożonej), ekwiwalent 60 gr suchej | | | | |

| | | | | |
|---|-----------------------|------|--------|-----|
| Aroma (end of boil) | Sybilla szyszka mokra | 30 g | 10 min | 7 % |
| 120 gr mokrej szyszki (mrożonej), ekwiwalent 30 gr suchej | | | | |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------|------|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 170 ml | White Labs |
| gęstwa 32-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 | chlerek wapnia [ml] | 0 g | Mash | --- |
| Fining | mech irlandzki | 3 g | Boil | 15 min |
| Water Agent | kwask askorbinowy | 0 g | Bottling | --- |