

Stout_vXX #XX

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **51**
- SRM **35**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **18.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **70 min**
- Evaporation rate **28 %/h**
- Boil size **26.8 liter(s)**

Mash information

- Mash efficiency **87.6 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 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 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 **16.8 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|-----------------|--------|------|
| Grain | pale Ale - viking | 2.6 kg (51.9%) | 80 % | 5.5 |
| Grain | monachijski I - viking | 1.15 kg (22.9%) | 78 % | 16 |
| Grain | monachijski II - viking | 0.55 kg (11%) | 78 % | 22 |
| Grain | karmelowy 300 - viking | 0.068 kg (1.4%) | 70 % | 300 |
| Grain | chocolate pale - fawcett | 0.3 kg (6%) | 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 | 0.055 kg (1.1%) | 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) | 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 |
|--------------------------------|------|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 150 ml | White Labs |
| gęstwa 23-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 | 10 min |
| Water Agent | kwask askorbinowy | 0 g | Bottling | --- |