

Stout_Tonka2 v6 #86

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **53**
- SRM **36.5**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20.4 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **100 min**
- Evaporation rate **12 %/h**
- Boil size **26.2 liter(s)**

Mash information

- Mash efficiency **78.6 %**
- Liquor-to-grist ratio **3.36 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25.9 liter(s)**

Steps

- Temp **66 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 **72.8C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **7 min** at **75C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **26.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|--------|------|
| Grain | Viking - pilzneński | 1 kg (16.8%) | 80 % | 4 |
| Grain | Mep©Ale | 3 kg (50.4%) | 82.1 % | 5.5 |
| Grain | Viking - monachijski I | 1 kg (16.8%) | 79 % | 16 |
| Grain | Weyermann - abbey | 0.4 kg (6.7%) | 75 % | 45 |
| Grain | Fawcett - czekoladowy pszeniczny | 0.2 kg (3.4%) | 72.7 % | 1000 |
| Grain | Chateau - black | 0.35 kg (5.9%) | 73 % | 1350 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|---------------------|--------|--------|------------|
| Boil | Warrior | 20 g | 60 min | 14.7 % |
| Aroma (end of boil) | Chinook PL | 25 g | 30 min | 8.6 % |
| Aroma (end of boil) | Perle szyszka mokra | 30 g | 10 min | 6.5 % |
| 120 gr mokrej szyszki (mrożonej), ekwiwalent 30 gr suchej | | | | |

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] | 3.03 g | Mash | --- |
| Water Agent | chlerek wapnia [ml] | 0 g | Mash | --- |
| Fining | mech irlandzki | 3 g | Boil | 10 min |
| Flavor | bób tonka | 6 g | Secondary | 20 day(s) |
| macerowane z 30 ml whisky przez ok 25 dni, dodane do 10L piwa | | | | |
| Flavor | cukier waniliowy | 12 g | Secondary | 20 day(s) |
| do czesci bez tonki | | | | |