

Stout

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **30**
- SRM **33.9**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **18.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **10 liter(s)**
- Total mash volume **13.7 liter(s)**

Steps

- Temp **69 C**, Time **70 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10 liter(s)** of strike water to **78.1C**
- Add grains
- Keep mash **70 min** at **69C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **18.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--|-----------------|-------|------|
| Grain | Mep©Ale | 2.8 kg (75.3%) | 79 % | 7 |
| Grain | Słód Żytni | 0.4 kg (10.8%) | 81 % | 9 |
| Grain | Słód Czekoladowy Jasny - 1kg - Viking Malt | 0.1 kg (2.7%) | 72 % | 400 |
| Grain | Słód Czekoladowy ciemny | 0.1 kg (2.7%) | 68 % | 1200 |
| Grain | Słód Carafa® Special typ III | 0.15 kg (4%) | 65 % | 1400 |
| Grain | Słód Karmelowy 600 - 1kg - Viking Malt | 0.1 kg (2.7%) | 70 % | 600 |
| Grain | Słód Żytni palony Anglia | 0.033 kg (0.9%) | 65 % | 650 |
| Grain | Pale Chocolate | 0.033 kg (0.9%) | 69 % | 600 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------------|--------|--------|------------|
| Boil | Minstrel® (UK) | 60 g | 30 min | 4.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------|-------------|-------------|---------------|-------------------|
| fermentis US-05 | Ale | Slant | 250 ml | fermentis |