

stout dla miska

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **28**
- SRM **28.2**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **16.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Briess - Pale Ale Malt | 4 kg (71.4%) | 80 % | 7 |
| Grain | Munich Malt | 1 kg (17.9%) | 80 % | 18 |
| Grain | Briess - Chocolate Malt | 0.3 kg (5.4%) | 60 % | 690 |
| Grain | Black Barley (Roast Barley) | 0.3 kg (5.4%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | Willamette | 30 g | 60 min | 7 % |
| Boil | East Kent Goldings | 20 g | 15 min | 6.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| us-05 | Ale | Slant | 200 ml | safale |