

Stout

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **28**
- SRM **42.3**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **40 C**, Time **5 min**
- Temp **52 C**, Time **10 min**
- Temp **60 C**, Time **10 min**
- Temp **68 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **16.1 liter(s)** of strike water to **43.3C**
- Add grains
- Keep mash **5 min** at **40C**
- Keep mash **10 min** at **52C**
- Keep mash **10 min** at **60C**
- Keep mash **45 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt | 2 kg (37.4%) | 80 % | 5 |
| Grain | Castle Malting - Pilsneński 6-rzędowy | 2 kg (37.4%) | 80 % | 5 |
| Grain | Red ale strzegom | 0.1 kg (1.9%) | 75 % | 70 |
| Grain | Abbey Castle | 0.15 kg (2.8%) | 80 % | 45 |
| Grain | Carafa III | 0.2 kg (3.7%) | 70 % | 1034 |
| Grain | Fawcett - Dark Crystal | 0.15 kg (2.8%) | 71 % | 300 |
| Grain | Karmelowy Pszeniczny Strzegom | 0.2 kg (3.7%) | 79 % | 130 |
| Grain | Blac svart | 0.2 kg (3.7%) | --- % | 1500 |
| Grain | Briess - Dark Chocolate Malt | 0.2 kg (3.7%) | 60 % | 827 |
| Grain | Black (Patent) Malt | 0.15 kg (2.8%) | 55 % | 1500 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|----------------|-------------|---------------|-------------|-------------------|
| Boil | Marynka | 30 g | 60 min | 8.8 % |