

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 - Pilzniejszy 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 Pszenny 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 %