

Stout

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **35**
- SRM **35.3**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **8.4 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (75%)	81 %	4
Grain	Caraaroma	0.1 kg (2.5%)	78 %	400
Grain	Płatki owsiane	0.4 kg (10%)	85 %	3
Grain	Jęczmień palony	0.2 kg (5%)	55 %	985
Grain	Carafa	0.1 kg (2.5%)	70 %	664
Grain	Czekoladowy	0.2 kg (5%)	60 %	788

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	25 g	60 min	6 %
Boil	Fuggles	50 g	10 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Windsor Ale	Ale	Dry	10 g	Danstar