

Rye Stout

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **37**
- SRM **37.6**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **0 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **17.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (51.7%)	80 %	4
Grain	Fawcett - Pale Chocolate	0.5 kg (8.6%)	71 %	600
Grain	Caraaroma	0.25 kg (4.3%)	78 %	400
Grain	Weyermann - Chocolate Wheat	0.35 kg (6%)	74 %	900
Grain	Weyermann - Carafa I	0.1 kg (1.7%)	70 %	690
Grain	Rye, Flaked	1.6 kg (27.6%)	78.3 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	25 g	60 min	11 %
Boil	Iunga	10 g	20 min	11 %
Boil	Iunga	40 g	1 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

FM13 Irlandzkie Ciemności	Ale	Liquid	2000 ml	Fermentum Mobile
------------------------------	-----	--------	---------	------------------