RYE PORTER

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **28**
- SRM **20.9**
- Style **Brown Porter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- 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 **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

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

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter Crisp	2.5 kg *(50%)*	83 %	6
Grain	Żytni	1.5 kg *(30%)*	85 %	8
Grain	Pilzneński Klepiskowy	0.5 kg *(10%)*	81 %	4
Grain	Weyermann - Chocolate Rye	0.3 kg *(6%)*	20 %	700
Grain	Karmelowy żytni Strzegom	0.1 kg *(2%)*	75 %	150
Grain	Weyermann - Carafa II Special	0.1 kg *(2%)*	70 %	837

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	20 min	11 %
Boil	Golding	50 g	5 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand Windsor Ale	Ale	Dry	22 g	Lallemand

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Extras

Type	Name	Amount	Use for	Time
Water Agent	Chlorek wapnia	10 g	Mash	60 min
Fining	Whirlflock	1 g	Boil	10 min
Water Agent	Witamina C	2 g	Bottling	---