Żonkowy stout v2

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **25**
- SRM **25.7**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **11 %/h**
- Boil size **28.1 liter(s)**

Mash information

- Mash efficiency **95 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **35 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **15.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **35 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep@ale	2.5 kg *(55.6%)*	81 %	8.5
Grain	Strzegom Monachijski typ II	1 kg *(22.2%)*	79 %	22
Grain	Strzegom Czekoladowy jasny	0.5 kg *(11.1%)*	68 %	400
Grain	Strzegom Karmel 30	0.25 kg *(5.6%)*	75 %	30
Grain	Weyermann - Dehusked Carafa III	0.25 kg *(5.6%)*	70 %	1024

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Columbus/Tomahawk/Zeus	16 g	60 min	14.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	1000 ml	Fermentum Mobile

Extras

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

Type	Name	Amount	Use for	Time
Other	laktoza	500 g	Boil	5 min
Flavor	łuska kakao	100 g	Boil	5 min