

## tropical stout wawer kuźnia

- Gravity **15.9 BLG**
- ABV ---
- IBU **46**
- SRM **64.4**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23 liter(s)**
- Total mash volume **30.7 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **23 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) Bel	4 kg (46.1%)	80 %	6
Grain	Weyermann - Carared	1 kg (11.5%)	75 %	45
Grain	Weyermann - Carapils	0.5 kg (5.8%)	78 %	4
Grain	weyermann - caramunich typ II	0.5 kg (5.8%)	75 %	125
Grain	Weyermann - Carafa I	0.5 kg (5.8%)	70 %	690
Grain	Fawcett - Pale Chocolate	1 kg (11.5%)	71 %	600
Grain	Strzegom Czekoladowy ciemny	0.08 kg (0.9%)	68 %	1200
Grain	żyto palone	0.1 kg (1.2%)	1 %	750
Adjunct	Płatki owsiane	1 kg (11.5%)	1 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	20 g	60 min	10 %

Boil	Chinook	20 g	60 min	13 %
Aroma (end of boil)	Mosaic	10 g	10 min	10 %
Aroma (end of boil)	Chinook	10 g	10 min	13 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Flavor	korzeń lukrecji	20 g	Boil	20 min
Flavor	owoce kandyzowane tropical mix	200 g	Boil	20 min