

Stout żytni

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **31**
- SRM **32.8**
- Style **Oatmeal Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.8 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **1 min** at **78C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale ale Crisp	3 kg (54.5%)	80 %	5
Grain	Żytni	1 kg (18.2%)	85 %	8
Grain	Strzegom Karmel 150	0.5 kg (9.1%)	75 %	150
Grain	Jęczmień palony	0.5 kg (9.1%)	5 %	985
Grain	Płatki owsiane	0.5 kg (9.1%)	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	25 g	50 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	22 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Water Agent	woda z Biedry	21000 g	Mash	90 min
Water Agent	gips piwowarski	5 g	Mash	90 min