

## 108 stout żytni

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **23**
- SRM **21.1**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **30.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **23.5 liter(s)**

### Steps

- Temp **72 C**, Time **60 min**

### Mash step by step

- Heat up **17.3 liter(s)** of strike water to **81.3C**
- Add grains
- Keep mash **60 min** at **72C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	4 kg (64.7%)	79 %	16
Grain	Strzegom Karmel 150	1.4 kg (22.7%)	75 %	150
Grain	Żytni	0.6 kg (9.7%)	85 %	8
Grain	Carafa II	0.18 kg (2.9%)	70 %	812

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	40 g	2 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	200 ml	105