

## Stout grudniowy

- Gravity **15 BLG**
- ABV ---
- IBU **47**
- SRM **39.1**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **28 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.4 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **20.9 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **14.8 liter(s)** of strike water to **73.1C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **19.4 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (81.3%)	80 %	4
Grain	Płatki jęczmienne	0.5 kg (8.1%)	85 %	3
Grain	Jęczmień palony	0.3 kg (4.9%)	55 %	985
Grain	Strzegom Czekoladowy jasny	0.1 kg (1.6%)	68 %	400
Grain	Strzegom Barwiący	0.1 kg (1.6%)	68 %	1300
Grain	Strzegom Karmel 300	0.15 kg (2.4%)	70 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	junga	35 g	60 min	11.6 %
Boil	Lublin (Lubelski)	35 g	15 min	3.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale

### Extras

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

Type	Name	Amount	Use for	Time
Spice	cynamon	10 g	Boil	60 min
Spice	goździki	10 g	Boil	60 min
Spice	kolendra	15 g	Boil	60 min
Spice	imbir	10 g	Boil	60 min
Spice	jałowiec - 10 ziaren	0 g	Boil	60 min
Spice	skórka z 1 pomarańczy	0 g	Boil	60 min
Spice	skórka z 1 cytryny	0 g	Boil	60 min