

## #4 Milk Stout Piernik

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **36**
- SRM **39**
- 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 **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **25.2 liter(s)**
- Total mash volume **32.4 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

### Mash step by step

- Heat up **25.2 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Sparge using **9.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3 kg (38.5%)	79 %	6
Grain	Strzegom Monachijski typ I	2 kg (25.6%)	79 %	16
Grain	Słód pszeniczny Bestmalz	1 kg (12.8%)	82 %	5
Grain	Fawcett - Pale Chocolate	0.4 kg (5.1%)	71 %	600
Grain	Fawcett - Pszeniczny Czekoladowy	0.3 kg (3.8%)	73 %	1001
Grain	Weyermann - Carafa II	0.3 kg (3.8%)	70 %	1100
Grain	Carahell	0.2 kg (2.6%)	77 %	26
Sugar	Milk Sugar (Lactose)	0.6 kg (7.7%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	40 g	60 min	11 %

### Yeasts

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

Type	Name	Amount	Use for	Time
Spice	Przyprawa do piernika	20 g	Boil	15 min
Spice	Przyprawa do piernika	20 g	Boil	10 min
Flavor	Skórka pomarańczy	20 g	Boil	7 min