

## milk stout v.4 2018

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **21**
- SRM **35.2**
- Style **Oatmeal Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **4 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **23.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18.5 liter(s)**

### Steps

- Temp **65 C**, Time **1 min**
- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **69.8C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **1 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	4 kg (71.4%)	80 %	7
Grain	Pilzneński	0.4 kg (7.1%)	81 %	4
Adjunct	laktoza	0.6 kg (10.7%)	--- %	---
Grain	Jęczmień palony	0.4 kg (7.1%)	55 %	1100
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.6%)	68 %	1200

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	70 min	13.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	100 ml	Safale