

## milk stout PP

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- Gravity **18 BLG**
- ABV ---
- IBU **38**
- SRM **46.1**
- Style **American 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 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

### Steps

- Temp **68 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **19.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **30 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (42.3%)	80 %	4
Grain	Viking Pale Ale malt	2 kg (28.2%)	80 %	5
Sugar	laktoza	0.5 kg (7%)	88 %	1
Grain	Carafa II	0.25 kg (3.5%)	70 %	812
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.5%)	68 %	1200
Grain	Caraaroma	0.25 kg (3.5%)	78 %	400
Grain	Jęczmień palony	0.25 kg (3.5%)	55 %	1200
Grain	Prażona pszenica IREKS	0.1 kg (1.4%)	70 %	1600
Grain	Płatki owsiane	0.5 kg (7%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Cascade	15 g	10 min	6 %
Boil	Marynka	40 g	60 min	10 %

### Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Safale S-04	Ale	Dry	11 g	Safale

### **Extras**

<b>Type</b>	<b>Name</b>	<b>Amount</b>	<b>Use for</b>	<b>Time</b>
Spice	kawa	100 g	Secondary	7 day(s)