

## Milk stout

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **21**
- SRM **27.4**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **75 C**, Time **1 min**

### Mash step by step

- Heat up **13.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **75C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.4 kg (47.1%)	80 %	5
Grain	Strzegom Monachijski typ I	0.5 kg (9.8%)	79 %	16
Grain	Strzegom Karmel 150	0.3 kg (5.9%)	75 %	150
Grain	Strzegom Czekoladowy jasny	0.3 kg (5.9%)	68 %	400
Grain	Jęczmień palony	0.3 kg (5.9%)	55 %	985
Grain	Płatki owsiane	0.3 kg (5.9%)	60 %	3
Grain	Płatki jęczmienne	0.3 kg (5.9%)	75 %	2
Sugar	Milk Sugar (Lactose)	0.7 kg (13.7%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	20 g	60 min	7 %
Boil	Perle	20 g	10 min	7 %

### Yeasts

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

### Extras

Type	Name	Amount	Use for	Time
Flavor	Laktoza	700 g	Boil	10 min

### Notes

- Ferm. burzliwa 17-20C 7 dni.  
Ferm. cicha 7 dni.  
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