

## #32 Milk Stout

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **30**
- SRM **49.8**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **13.1 liter(s)**

### Steps

- Temp **68 C**, Time **40 min**
- Temp **70 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **10.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **40 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.15 kg (36.5%)	80 %	5
Grain	Żytni	0.45 kg (14.3%)	85 %	8
Grain	Karmelowy Czerwony	0.35 kg (11.1%)	75 %	59
Grain	Strzegom Karmel 300	0.15 kg (4.8%)	70 %	299
Grain	Fawcett - Pale Chocolate	0.1 kg (3.2%)	71 %	600
Grain	Weyermann - Carafa I	0.1 kg (3.2%)	70 %	690
Grain	Weyermann - Carafa II	0.1 kg (3.2%)	70 %	837
Grain	Weyermann - Dehusked Carafa III	0.1 kg (3.2%)	70 %	1024
Grain	Strzegom Czekoladowy ciemny	0.2 kg (6.3%)	68 %	1200
Grain	Strzegom pszenica prażona	0.1 kg (3.2%)	70 %	1000
Grain	Płatki owsiane	0.1 kg (3.2%)	85 %	3
Sugar	Milk Sugar (Lactose)	0.25 kg (7.9%)	76.1 %	0

## Hops

<b>Use for</b>	<b>Name</b>	<b>Amount</b>	<b>Time</b>	<b>Alpha acid</b>
Boil	Magnum	5 g	60 min	12.9 %
Boil	Magnum	10 g	30 min	12.9 %