

# milk stout

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **25**
- SRM **44**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.9 liter(s)**
- Total mash volume **27.8 liter(s)**

## Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20.9 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5.3 kg (76.3%)	80 %	5
Grain	Jęczmień palony	0.5 kg (7.2%)	55 %	985
Grain	Strzegom Czekoladowy ciemny	0.5 kg (7.2%)	68 %	1200
Grain	Strzegom Karmel 600	0.25 kg (3.6%)	68 %	601
Grain	Płatki owsiane	0.4 kg (5.8%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	50 min	15.5 %