

# Milk Stout

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **26**
- SRM **37.9**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **23.3 liter(s)**

## Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3 kg (54.2%)	85 %	7
Grain	Weyermann Specjal W	0.5 kg (9%)	68 %	300
Grain	Viking Dextrine malt	0.25 kg (4.5%)	80 %	13
Grain	Weyermann - Chocolate Rye	0.25 kg (4.5%)	20 %	493
Grain	Weyermann - Carafa I	0.25 kg (4.5%)	70 %	690
Grain	Weyermann - Chocolate Wheat	0.25 kg (4.5%)	74 %	788
Grain	Jęczmień palony	0.15 kg (2.7%)	55 %	985
Sugar	Milk Sugar (Lactose)	0.7 kg (12.7%)	76.1 %	0
Adjunct	Pomarańcze	0.18 kg (3.3%)	100 %	1
2kg, ok. 180 g cukrów				

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	50 g	60 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Spice	Zest z pomarańczy	30 g	Boil	60 min