

# Milk Stout

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **31**
- SRM **31**
- Style **Dry Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **28.4 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **19.3 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **76C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **28.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Viking	3.5 kg (63.6%)	80 %	5
Grain	Carmel Aromatic Viking	0.5 kg (9.1%)	80 %	180
Grain	Płatki pszeniczne	0.5 kg (9.1%)	85 %	3
Grain	Płatki owsiane	0.5 kg (9.1%)	85 %	3
Słody ciemne na ok 20-30 min zacierania				
Grain	Jęczmień palony	0.5 kg (9.1%)	20 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	25 g	60 min	11.2 %
Boil	Golding	20 g	20 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	150 ml	Safale

## Extras

Type	Name	Amount	Use for	Time
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Water Agent	Chlorek wapnia	4 g	Boil	60 min
Water Agent	Soda oczyszczona	4 g	Boil	60 min
Flavor	Laktoza	1000 g	Boil	20 min
Fining	Mech irlandzki	6 g	Boil	15 min

## Notes

- Woda z Biedry2:  
HCO - 134,2  
SO - 69,54  
Cl - 18  
F - 0,16  
Ca - 60,12  
Mg - 13,37  
Na - 5  
K - 0,75  
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