

Milk Stout

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **30**
- SRM **31**
- 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 **12 %/h**
- Boil size **24.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **14.5 liter(s)**
- Total mash volume **18.9 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **3 min**

Mash step by step

- Heat up **14.5 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **3 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.6 kg (32.7%)	80 %	6
Grain	Weyermann - Pale Ale Malt	1.8 kg (36.7%)	85 %	7
Grain	Caraaroma	0.25 kg (5.1%)	78 %	400
Grain	Czekoladowy	0.4 kg (8.2%)	60 %	960
sólód czekoladowy dodawaj przed wygrzewem po próbie jodowej				
Grain	Strzegom Karmel 150	0.2 kg (4.1%)	75 %	150
Grain	Strzegom Karmel 300	0.15 kg (3.1%)	70 %	299
Sugar	Milk Sugar (Lactose)	0.5 kg (10.2%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	40 g	60 min	7 %

Yeasts

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