

Pierwszy Milk Stout

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **30**
- SRM **38.8**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.1 liter(s)**
- Total mash volume **16.2 liter(s)**

Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **12.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **11 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	1.5 kg (33%)	85 %	7
Grain	Briess - Bonlander Munich Malt	1.5 kg (33%)	78 %	20
Sugar	Milk Sugar (Lactose)	0.5 kg (11%)	76.1 %	0
Grain	Caraaroma	0.4 kg (8.8%)	78 %	400
Grain	Simpsons - Roasted Barley	0.4 kg (8.8%)	70 %	1084
Grain	Oats, Flaked	0.25 kg (5.5%)	80 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Lublin (Lubelski)	15 g	20 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	15 g	10 min	4 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	5 g	5 min	15.5 %

Yeasts

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