

Czekoladowy Milk Stout

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **19**
- SRM **27.4**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **4 %**
- Size with trub loss **23.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **9 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.1 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **35 min**
- Temp **75 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **16.4 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **35 min** at **72C**
- Keep mash **10 min** at **75C**
- Keep mash **10 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.8 kg (66.7%)	80 %	5
Grain	Biscuit Malt	0.05 kg (0.9%)	79 %	45
Grain	Strzegom Czekoladowy ciemny	0.4 kg (7%)	68 %	1200
Grain	Strzegom Karmel 600	0.1 kg (1.8%)	68 %	601
Grain	Château Crystal 150	0.1 kg (1.8%)	78 %	150
Grain	Pszeniczny	0.25 kg (4.4%)	85 %	4
Adjunct	Płatki Jęczmienne	0.5 kg (8.8%)	80 %	4
Sugar	Milk Sugar (Lactose)	0.5 kg (8.8%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	25 g	60 min	5.1 %
Aroma (end of boil)	East Kent Goldings	25 g	20 min	5.1 %

Yeasts

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