

# Świąteczny Milk Stout v2

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **13**
- SRM **28.4**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **26.6 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24.6 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18.7 liter(s)** of strike water to **70.9C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (61.1%)	80 %	5
Grain	Karmelowy Jasny 30EBC	0.5 kg (7.6%)	75 %	30
Grain	Płatki owsiane	0.5 kg (7.6%)	85 %	3
Grain	Viking Wheat Malt	0.35 kg (5.3%)	83 %	5
Grain	Jęczmień palony	0.25 kg (3.8%)	55 %	985
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.8%)	68 %	1200
Sugar	Milk Sugar (Lactose)	0.7 kg (10.7%)	76.1 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	60 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	100 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Spice	goździki	5 g	Boil	10 min
Spice	cynamon	8 g	Boil	10 min
Spice	gałka muszkatałowa	3 g	Boil	10 min
Spice	anyż	4 g	Boil	10 min
Flavor	skórki pomarańczy	60 g	Boil	10 min
Spice	imbir świeży	22 g	Boil	10 min
Fining	wirfloc	2 g	Boil	10 min