

# Milk Stout Bitwa

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **20**
- SRM **31.9**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.4 liter(s)**

## Mash information

- Mash efficiency **84 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **22.4 liter(s)** of **76C** water or to achieve **34.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (53.8%)	80 %	5
Grain	Viking Pilsner malt	1.5 kg (23.1%)	82 %	4
Grain	Strzegom Karmel 300	0.2 kg (3.1%)	70 %	299
Grain	Carafa II	0.1 kg (1.5%)	70 %	812
Grain	Jęczmień palony	0.2 kg (3.1%)	55 %	985
Grain	Fawcett - Pszeniczny Czekoladowy	0.5 kg (7.7%)	73 %	1001
Sugar	Milk Sugar (Lactose)	0.5 kg (7.7%)	76.1 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	50 g	60 min	4 %
Boil	East Kent Goldings	30 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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WLP013 - London Ale Yeast	Ale	Slant	150 ml	White Labs
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### Extras

Type	Name	Amount	Use for	Time
Flavor	laktoza	500 g	Boil	10 min