

## Milks

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **28**
- SRM **39.9**
- 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 **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **26 liter(s)**
- Total mash volume **32.5 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **73 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **26 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (42.9%)	80 %	5
Grain	Viking Munich Malt	2 kg (28.6%)	78 %	18
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.6%)	68 %	1200
Grain	Jęczmień palony	0.25 kg (3.6%)	55 %	985
Grain	Strzegom pszenica prażona	0.25 kg (3.6%)	70 %	1000
Grain	Żyto prażone	0.25 kg (3.6%)	65 %	1000
Grain	Płatki owsiane	0.5 kg (7.1%)	85 %	3
Sugar	Milk Sugar (Lactose)	0.5 kg (7.1%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	7 %
Boil	Lomik	30 g	40 min	3.8 %
Boil	Cascade	10 g	15 min	6 %

### Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Safale US-05	Ale	Slant	10 ml	Fermentis