

milk

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **25**
- SRM **29.3**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (66%)	80 %	5
Grain	Strzegom Pilzneński	0.5 kg (9.4%)	80 %	4
Grain	Słód Caramunich Typ II Weyermann	0.2 kg (3.8%)	73 %	120
Grain	Carafa II	0.1 kg (1.9%)	70 %	812
Grain	Jęczmień palony	0.3 kg (5.7%)	55 %	985
Grain	Strzegom Czekoladowy jasny	0.2 kg (3.8%)	68 %	400
Sugar	Milk Sugar (Lactose)	0.5 kg (9.4%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	10 %
Boil	Marynka	15 g	15 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale