

## SDS

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **59**
- SRM **7.5**
- Style **Dry 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 **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.7 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilznieński Viking Malt 3,2-4,5	2 kg (38.7%)	80 %	4
Grain	Słód Pale Ale strzegom	1.72 kg (33.3%)	79 %	6
Grain	Wędzony bukiem Viking Malt	0.95 kg (18.4%)	82 %	10
Grain	Palone ziarno jęczmienia	0.5 kg (9.7%)	70 %	100

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Kazbek	100 g	45 min	6.24 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	---