

## MS19

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **47**
- SRM **41.2**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **75C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (50%)	80 %	5
Grain	Pszeniczny	1 kg (16.7%)	85 %	4
Grain	Caraaroma	1 kg (16.7%)	78 %	400
Grain	Strzegom pszenica prażona	0.5 kg (8.3%)	70 %	1000
Sugar	Milk Sugar (Lactose)	0.5 kg (8.3%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	50 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale