

## #4

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **26**
- SRM **31.8**
- 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 **14.5 liter(s)**
- Total mash volume **19.4 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **14.5 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (74.8%)	79 %	6
Grain	Karmelowy Jasny 30EBC	0.3 kg (5.6%)	75 %	30
Grain	Jęczmień palony	0.3 kg (5.6%)	55 %	985
Grain	Strzegom Czekoladowy ciemny	0.25 kg (4.7%)	68 %	1200
Sugar	Milk Sugar (Lactose)	0.5 kg (9.3%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	50 min	8.7 %
Boil	Marynka	15 g	20 min	8.7 %

### Yeasts

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