

## Noc

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **54**
- SRM **26**
- Style **American 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 **19.3 liter(s)**
- Total mash volume **25.8 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **35 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **35 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.8 kg (74.4%)	80 %	5
Grain	Płatki owsiane	0.2 kg (3.1%)	85 %	3
Grain	Strzegom Czekoladowy jasny	0.1 kg (1.6%)	68 %	400
Grain	Jęczmień palony	0.1 kg (1.6%)	55 %	985
Grain	Carafa II	0.25 kg (3.9%)	70 %	812
Grain	Weyermann - Carafa I	0.1 kg (1.6%)	70 %	690
Grain	Pszeniczny	0.2 kg (3.1%)	85 %	4
Grain	Strzegom Karmel 150	0.5 kg (7.8%)	75 %	150
Grain	Płatki pszeniczne	0.2 kg (3.1%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	30 g	60 min	9.5 %
Boil	Amarillo	20 g	30 min	9.5 %

Boil	Mosaic	30 g	15 min	10 %
Dry Hop	Cascade	50 g	4 day(s)	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	900 ml	Fermentum Mobile