

# #1

- Gravity **17.4 BLG**
- ABV ---
- IBU **47**
- SRM **40**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **24.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **27.6 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **20.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **29.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	6 kg (78.9%)	79 %	6
Grain	Strzegom Monachijski typ I	0.6 kg (7.9%)	79 %	16
Grain	Strzegom Czekoladowy ciemny	0.3 kg (3.9%)	68 %	1200
Adjunct	Płatki jęczmienne	0.4 kg (5.3%)	--- %	---
Adjunct	Jęczmień prażony	0.3 kg (3.9%)	55 %	985

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	30 g	60 min	19 %

## Yeasts

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