

# Świąteczne Z

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **26**
- SRM **50.5**
- 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 **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód pale ale Viking Malt	5 kg (80.6%)	--- %	5
Grain	Carafa III	0.6 kg (9.7%)	70 %	1034
Grain	Strzegom Czekoladowy ciemny	0.6 kg (9.7%)	68 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	60 g	60 min	4.6 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Flavor	laktoza	500 g	Boil	15 min
Other	Wanilia laska	3 g	Boil	15 min
Spice	Skórka pomarańczy	20 g	Boil	15 min

Spice	Goździki	5 g	Boil	15 min
Spice	Cynamon	5 g	Boil	15 min
Spice	Cukier waniliowy	15 g	Boil	15 min