

# Chlebowe świąteczne

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU ---
- SRM **29.3**
- Style **Northern English Brown Ale**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **10 liter(s)**

## Steps

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

## Mash step by step

- Heat up **7.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Czekoladowy jasny	1 kg (28.6%)	68 %	400
Grain	Viking Pale Ale malt	1 kg (28.6%)	80 %	5
Grain	Karmelowy Jasny 30EBC	0.5 kg (14.3%)	75 %	30
Adjunct	Chleb	1 kg (28.6%)	--- %	---

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Spice	Goździki	30 g	Boil	30 min
Spice	Cynamon	20 g	Boil	30 min
Spice	Anyż	20 g	Boil	30 min
Spice	Wanilia	10 g	Boil	30 min
Spice	Pieprz	15 g	Boil	30 min
Spice	Gałka muszkatołowa	15 g	Boil	30 min
Spice	Imbir	20 g	Boil	30 min

Spice	Kardamon	20 g	Boil	30 min
Spice	Ziele angielskie	20 g	Boil	30 min
Spice	Owoc jałowca	15 g	Boil	30 min