

# świąteczne

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **57**
- SRM **30.3**
- Style **Christmas/Winter Specialty Spiced Beer**

## 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 **86 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **69C**
- 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	Monachijski	2 kg (32.3%)	80 %	16
Grain	Biscuit Malt	0.5 kg (8.1%)	77 %	50
Grain	Karmelowy Pszeniczny Strzegom	0.5 kg (8.1%)	79 %	130
Grain	Carafa III	0.2 kg (3.2%)	70 %	1034
Grain	Strzegom Pale Ale	2.5 kg (40.3%)	79 %	6
Grain	Strzegom Karmel 600	0.5 kg (8.1%)	68 %	601

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	23.91 g	60 min	6 %
Boil	Mosaic	23.91 g	60 min	10 %
Boil	Nelson Sauvín	23.91 g	60 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Spice	cynamon	15 g	Boil	10 min
Spice	goździki	4.78 g	Boil	10 min
Spice	kardamon	4.78 g	Boil	10 min
Spice	zest	4.78 g	Boil	10 min