

# świąteczne

- Gravity **15.4 BLG**
- ABV ---
- IBU **33**
- SRM **40.9**
- 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 **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

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

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **69C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	2 kg (36.4%)	79 %	16
Grain	Strzegom Pilzneński	2 kg (36.4%)	80 %	4
Grain	Biscuit Malt	0.5 kg (9.1%)	77 %	50
Grain	Strzegom Pszeniczny	0.5 kg (9.1%)	81 %	6
Grain	Fawcett - Pszeniczny Czekoladowy	0.5 kg (9.1%)	73 %	1001

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	24 g	55 min	11.5 %
Aroma (end of boil)	boadicea	25 g	10 min	7.6 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Spice	cynamon	15 g	Boil	10 min

Spice	goździki	10 g	Boil	10 min
-------	----------	------	------	--------