

# święteczne przyprawiane

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **10**
- SRM **12.7**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **2 %**
- Size with trub loss **14.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **16.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **6 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **21.7 liter(s)**

## Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **66.6C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **1 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1 kg (32.3%)	81 %	4
Grain	Briess - Pale Ale Malt	1 kg (32.3%)	80 %	7
Grain	Monachijski	0.6 kg (19.4%)	80 %	16
Grain	Strzegom Bursztynowy	0.4 kg (12.9%)	70 %	49
Grain	Briess - Chocolate Malt	0.1 kg (3.2%)	60 %	690

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hersbrucker	10 g	60 min	5.1 %
Boil	Tettnang	5 g	30 min	3.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Spice	imbir	5 g	Boil	10 min
Spice	cynamion	3 g	Boil	10 min
Spice	kolendra	5 g	Boil	10 min
Spice	goździki	5 g	Boil	10 min
Spice	gałka muszkatałowa	5 g	Boil	10 min
Spice	ziele angielskie	5 g	Boil	10 min