

# Piwo świąteczne - Christmas Ale

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **42**
- SRM **38.5**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **34.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

## Steps

- Temp **53 C**, Time **15 min**
- Temp **68 C**, Time **55 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **55 min** at **68C**
- Sparge using **20.5 liter(s)** of **76C** water or to achieve **34.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (62.5%)	79 %	6
Grain	Strzegom Monachijski typ I	1 kg (12.5%)	79 %	16
Grain	Strzegom Karmel 600	0.5 kg (6.3%)	68 %	601
Grain	Extra black	0.5 kg (6.3%)	65 %	1400
Liquid Extract	Miód Gryczany (Buckwheat Honey)	1 kg (12.5%)	70 %	40

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15 %
Boil	Columbus/Tomahawk/Zeus	15 g	20 min	15 %
Boil	Willamette	15 g	10 min	5 %
Boil	Willamette	15 g	5 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis Safale US-05	Ale	Dry	14.38 g	---

## Extras

Type	Name	Amount	Use for	Time
Spice	imbir	37.5 g	Boil	10 min
Spice	cynamon	37.5 g	Boil	10 min
Spice	gałka muszkatołowa	6.25 g	Boil	10 min
Spice	anyż	9.38 g	Boil	10 min
Spice	goździki	6.25 g	Boil	10 min
Spice	kardamon	6.25 g	Boil	10 min
Other	skórka z pomarańczy	0 g	Boil	10 min
Other	skórka z 1 cytryny	0 g	Boil	10 min