

# Świąteczne

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **26**
- SRM **10.5**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

## Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **64 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **5 min** at **76C**
- Sparge using **18.8 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (50%)	80 %	5
Grain	Strzegom Pilzneński	0.5 kg (12.5%)	80 %	4
Grain	Pszeniczny	0.5 kg (12.5%)	85 %	4
Grain	Special B Castle	0.1 kg (2.5%)	70 %	350
Grain	Strzegom Wiedeński	0.5 kg (12.5%)	79 %	10
Grain	Viking melanoidynowy	0.2 kg (5%)	75 %	60
Grain	Fawcett - Pale Chocolate	0.1 kg (2.5%)	71 %	600
Grain	Acid Malt	0.1 kg (2.5%)	58.7 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	60 min	13 %
Boil	Tettnang	20 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM20 Białe Walonki	Wheat	Liquid	1000 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips Piwowarski	2 g	Mash	60 min
Water Agent	Mech irlandzki	4 g	Boil	15 min
Flavor	Laktoza	250 g	Boil	15 min
Flavor	Suszona śliwka	250 g	Boil	15 min
Water Agent	Pożywka dla drożdzy	6 g	Boil	15 min
Spice	Cynamon	7 g	Boil	10 min
Spice	Korzeń imbiru	13 g	Boil	10 min
Spice	Goździki	5 g	Boil	10 min
Spice	Kardamon	8 g	Boil	10 min
Flavor	Skórka pomarańczy	70 g	Boil	10 min
Flavor	Kolendra	8 g	Boil	10 min
Flavor	Werbena Cytrynowa	15 g	Boil	10 min

## Notes

- Kafir 10g do rozlewu  
Pożywka dla drożdzy 6g - rozpuścić w ciepłej wodzie  
kwas mlekowy 5ml - woda do wystudzenia  
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