

Świąteczne

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **16**
- SRM **27.9**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (62.5%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (15.6%)	79 %	16
Grain	Strzegom Karmel 150	0.2 kg (3.1%)	75 %	150
Grain	Strzegom Karmel 300	0.2 kg (3.1%)	70 %	299
Grain	Strzegom Czekoladowy jasny	0.4 kg (6.2%)	68 %	400
Grain	Strzegom Barwiący	0.2 kg (3.1%)	68 %	1300
Grain	Płatki owsiane	0.4 kg (6.2%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	50 g	30 min	4 %
Boil	Willamette	15 g	10 min	5.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

Extras

Type	Name	Amount	Use for	Time
Spice	Przyprawa do piernika	70 g	Boil	10 min