

Świąteczne

- Gravity **18.7 BLG**
- ABV ---
- IBU **19**
- SRM **29.6**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (47.3%)	80 %	4
Grain	Weyermann pszeniczny jasny	1 kg (13.5%)	80 %	6
Grain	Jęczmień palony	0.2 kg (2.7%)	55 %	985
Grain	Weyermann - Acidulated Malt	0.1 kg (1.4%)	80 %	6
Grain	Strzegom Karmel 600	0.2 kg (2.7%)	68 %	601
Liquid Extract	Honey	1 kg (13.5%)	75 %	2
Sugar	cukier	1 kg (13.5%)	--- %	---
Adjunct	płatki owsiane	0.4 kg (5.4%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Sybilla	40 g	70 min	3.5 %
Boil	Herkules	10 g	10 min	17 %
Aroma (end of boil)	Herkules	0 g	20 min	17 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - London Ale	Ale	Liquid	125 ml	Wyeast Labs

Extras

Type	Name	Amount	Use for	Time
Spice	goździki	6 g	Boil	10 min
Spice	cynamon	6 g	Boil	10 min
Spice	gałka muszkatułowa	6 g	Boil	10 min
Other	skórka pomarańczy 3 szt	30 g	Boil	10 min
Spice	kardamon	6 g	Boil	10 min