

Świąteczne

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **54**
- SRM **32.3**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **30.5 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **23.4 liter(s)** of strike water to **75.3C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (70.4%)	80 %	5
Grain	Płatki owsiane	0.4 kg (5.6%)	85 %	3
Grain	Płatki żytnie	0.2 kg (2.8%)	85 %	8
Grain	Strzegom Karmel 150	1 kg (14.1%)	75 %	150
Grain	Strzegom Czekoladowy ciemny	0.3 kg (4.2%)	68 %	1200
Grain	Jęczmień palony	0.2 kg (2.8%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	50 g	60 min	12 %
Boil	Mandarina Bavaria	10 g	15 min	8.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.2 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Spice	Imbir	10 g	Boil	15 min
Spice	Cynamon	5 g	Boil	15 min
Spice	Goździki	1 g	Boil	15 min
Flavor	Skórka pomarańczy	20 g	Secondary	4 day(s)
Spice	Imbir	5 g	Secondary	4 day(s)
Spice	Cynamon	5 g	Secondary	4 day(s)
Spice	Goździki	1 g	Secondary	4 day(s)
Spice	Anyż nasiona	1 g	Secondary	4 day(s)