

Świąteczne

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **28**
- SRM **27.8**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **80 C**, Time **0 min**

Mash step by step

- Heat up **16.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **0 min** at **80C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (74.8%)	80 %	4
Grain	Carafa II	0.2 kg (3.7%)	70 %	812
Grain	Strzegom Karmel 150	0.2 kg (3.7%)	75 %	150
Grain	Strzegom Karmel 600	0.55 kg (10.3%)	68 %	601
Grain	Płatki owsiane	0.4 kg (7.5%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	10 g	60 min	7 %
Boil	Marynka	10 g	45 min	10 %
Boil	Citra	15 g	20 min	12 %
Dry Hop	Citra	10 g	7 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	5 g	Safale

Extras

Type	Name	Amount	Use for	Time
Flavor	laktoza	300 g	Boil	5 min