

## xmas

- Gravity **18.7 BLG**
- ABV ---
- IBU **24**
- SRM **33**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **20.5 liter(s)**
- Total mash volume **28.7 liter(s)**

### Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **20.5 liter(s)** of strike water to **70.4C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Płatki owsiane	0.5 kg (6.1%)	60 %	3
Grain	Viking Pale Ale malt	5 kg (61%)	80 %	5
Grain	Strzegom Pilzniejszy	1.5 kg (18.3%)	80 %	4
Grain	Strzegom Karmel 150	0.5 kg (6.1%)	75 %	150
Grain	Karmelowy Pszeniczny Strzegom	0.2 kg (2.4%)	79 %	120
Grain	Briess - Chocolate Malt	0.2 kg (2.4%)	60 %	1150
Grain	Weyermann - Carafa II	0.2 kg (2.4%)	70 %	1150
Grain	Pszeniczny Czekoladowy	0.1 kg (1.2%)	73 %	1001

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	30 g	60 min	9.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Safale S-04	Ale	Dry	23 g	Fermentis
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