

# xmas ale piwoszarnia

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- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **14**
- SRM **26.6**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **87 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

## Steps

- Temp **68 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **50 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (66.7%)	82 %	4
Grain	Viking Munich Malt	1 kg (16.7%)	78 %	18
Grain	Strzegom Karmel 150	0.2 kg (3.3%)	75 %	150
Grain	Strzegom Karmel 300	0.2 kg (3.3%)	70 %	299
Grain	Strzegom Czekoladowy 400	0.4 kg (6.7%)	68 %	400
Grain	Barwiący	0.2 kg (3.3%)	55 %	985

## Hops

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

## Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew T-58	Ale	Dry	11 g	Fermentis