

# christmas ale

- Gravity **14 BLG**
- ABV ---
- IBU **39**
- SRM **30.6**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **34 liter(s)**
- Trub loss **5 %**
- Size with trub loss **35.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **43 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

## Steps

- Temp **68 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **20.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **29.4 liter(s)** of **76C** water or to achieve **43 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (48.8%)	80 %	5
Grain	Strzegom Karmel 30	0.5 kg (6.1%)	75 %	30
Grain	Strzegom Pilzneński	0.5 kg (6.1%)	80 %	4
Grain	Wheat, Flaked	0.6 kg (7.3%)	77 %	4
Grain	spelled, Flaked	0.4 kg (4.9%)	78 %	3
Grain	Rye, Flaked	0.2 kg (2.4%)	78.3 %	4
Grain	Chocolate Malt (UK)	0.6 kg (7.3%)	73 %	887
Liquid Extract	Honey	0.9 kg (11%)	75 %	2
Sugar	Cane (Beet) Sugar	0.5 kg (6.1%)	100 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	15.5 %
Boil	Magnum	20 g	60 min	13.5 %

## Extras

Type	Name	Amount	Use for	Time
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Flavor	Syrop piernikowy własny	1000 g	Boil	10 min
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