

Christmas Ale

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **24**
- SRM **26**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **39.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **48.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **35.9 liter(s)**
- Total mash volume **46.1 liter(s)**

Steps

- Temp **54 C**, Time **15 min**
- Temp **65 C**, Time **35 min**
- Temp **72 C**, Time **35 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **35.9 liter(s)** of strike water to **58.9C**
- Add grains
- Keep mash **15 min** at **54C**
- Keep mash **35 min** at **65C**
- Keep mash **35 min** at **72C**
- Keep mash **10 min** at **75C**
- Sparge using **22.5 liter(s)** of **76C** water or to achieve **48.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (48.8%)	80 %	5
Grain	Viking - Żytni	2 kg (19.5%)	85 %	8
Grain	Pszeniczny	2 kg (19.5%)	85 %	4
Grain	Jęczmień palony	0.5 kg (4.9%)	55 %	985
Grain	Strzegom Karmel 300	0.5 kg (4.9%)	70 %	299
Grain	Czekoladowy	0.25 kg (2.4%)	60 %	788

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	6.8 %
Aroma (end of boil)	Lomik	50 g	10 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M36 Liberty Bell	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Spice	Cynamon	35 g	Boil	10 min
Spice	Anyż	20 g	Boil	10 min
Spice	Kardamon	5 g	Boil	10 min
Spice	goździki	30 g	Boil	10 min