

# Christmas Ale

- Gravity **22.2 BLG**
- ABV **10 %**
- IBU **28**
- SRM **37.4**
- Style **Specialty Beer**

## Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **20.5 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **20.2 liter(s)**
- Total mash volume **26.7 liter(s)**

## Steps

- Temp **45 C**, Time **15 min**
- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **25 min**
- Temp **72 C**, Time **25 min**
- Temp **79 C**, Time **1 min**

## Mash step by step

- Heat up **20.2 liter(s)** of strike water to **49C**
- Add grains
- Keep mash **15 min** at **45C**
- Keep mash **10 min** at **52C**
- Keep mash **25 min** at **62C**
- Keep mash **25 min** at **72C**
- Keep mash **1 min** at **79C**
- Sparge using **6.8 liter(s)** of **76C** water or to achieve **20.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Colorado Pale Base Malt - Viking Malt	3 kg (40%)	80 %	12
Grain	Weyermann - Rye Malt	1 kg (13.3%)	85 %	7
Grain	Colorado Honing Malt - Viking Malt	1 kg (13.3%)	85 %	12
Grain	Weyermann - Cararye	1 kg (13.3%)	79 %	110
Grain	Weyermann - Chocolate Rye	0.2 kg (2.7%)	20 %	493
Grain	Weyermann - Carafa II	0.3 kg (4%)	70 %	1100
Adjunct	Miód Gryczany (Buckwheat Honey)	1 kg (13.3%)	70 %	40
Dodane po chmieleniu				
Adjunct	Łuska ryżowa	0 kg	1 %	0
Namoczoną łuske wsypać na spód kadzi filtracyjnej				

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Ella (AUS)	15 g	40 min	14.6 %
Aroma (end of boil)	Willamette (USA)	15 g	10 min	4.5 %
Aroma (end of boil)	Ella (AUS)	15 g	10 min	14.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Fining	Wirfloc T	1.25 g	Boil	15 min
Spice	Laski cynamonu	15 g	Boil	10 min
Spice	Gałka muszkatolowa mielona	5 g	Boil	10 min
Spice	Goździki	20 g	Boil	10 min
16 sztuk				
Spice	Skórka pomarańczy	100 g	Boil	10 min
Spice	Imbir cięty	5.5 g	Boil	10 min
Spice	Kardamon	15 g	Boil	10 min

## Notes

- Goździki i kardamon w sztukach.

Następnym razem więcej przypraw.  
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