

# Beer di Natale ver DE

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **25**
- SRM **28.3**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **3 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

## Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **19.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (Maris Otter) UK	5 kg (74%)	80.3 %	5.3
Grain	Aromatic Malt Belgian	0.5 kg (7.4%)	78 %	100
Grain	Crystal Malt UK	0.5 kg (7.4%)	72 %	90
Grain	Carawheat	0.19 kg (2.8%)	77 %	125
Grain	Pszeniczny Czekoladowy	0.1 kg (1.5%)	73 %	1001
Grain	Jęczmień palony	0.3 kg (4.4%)	55 %	985
Adjunct	Oat Flakes	0.17 kg (2.5%)	80 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Northern Brewer	25 g	60 min	9 %
Boil	Tettnang	25 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safbrew T-58	Ale	Dry	11 g	Fermentis
--------------	-----	-----	------	-----------

### Extras

Type	Name	Amount	Use for	Time
Flavor	skórka z 2 pomarańczy	0 g	Boil	15 min
Spice	goździki 5szt.	0 g	Boil	15 min
Spice	imbir świeży drobno starty	50 g	Boil	15 min
Spice	kardamon - pół łyż.	0 g	Boil	15 min
Spice	cynamon - 1 kora	0 g	Boil	15 min
Spice	gałka muskatołowa - pół kulki	0 g	Boil	15 min