

# Xmas Stout

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- Gravity **21.3 BLG**
- ABV **9.5 %**
- IBU **33**
- SRM **42.5**
- 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 **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **28.5 liter(s)**
- Total mash volume **36.7 liter(s)**

## Steps

- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **28.5 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **5.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (57.8%)	79 %	6
Grain	Pszeniczny	1 kg (11.6%)	85 %	4
Grain	Strzegom Karmel 150	0.5 kg (5.8%)	75 %	150
Grain	Żytni	0.5 kg (5.8%)	85 %	8
Grain	Strzegom Czekoladowy ciemny	0.5 kg (5.8%)	68 %	1200
Grain	Płatki owsiane	0.4 kg (4.6%)	85 %	3
Sugar	Milk Sugar (Lactose)	0.5 kg (5.8%)	76.1 %	0
Grain	Jęczmień palony	0.25 kg (2.9%)	55 %	985

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Marynka	20 g	20 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM12 W szkocką kratę	Ale	Liquid	100 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Spice	cynamon	15.2 g	Boil	15 min
Spice	goździki	10.15 g	Boil	15 min
Spice	skórka pomarańczy	20 g	Boil	10 min