

# Krystmas ejl

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **35**
- SRM **30.7**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **27.8 liter(s)**

## Steps

- Temp **50 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **20.8 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (57.6%)	81 %	4
Grain	Biscuit Malt	0.5 kg (7.2%)	79 %	50
Grain	Strzegom Karmel 300	0.6 kg (8.6%)	70 %	300
Grain	Strzegom Czekoladowy ciemny	0.3 kg (4.3%)	68 %	1200
Grain	Pszeniczny	0.5 kg (7.2%)	85 %	4
Grain	Płatki owsiane	0.35 kg (5%)	85 %	3
Grain	Monachijski	0.7 kg (10.1%)	80 %	15

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	magnum PL	25 g	60 min	12 %
Aroma (end of boil)	tradition	25 g	15 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Danstar - Nottingham	Ale	Dry	11 g	---
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### Extras

Type	Name	Amount	Use for	Time
Spice	laska wanilii	1 g	Boil	15 min
1 laska				
Spice	cynamon mielony	10 g	Boil	15 min
Spice	goździki	10 g	Boil	15 min
10 sztuk				
Spice	imbir mielony	10 g	Boil	15 min
Spice	ziele angielskie	10 g	Boil	15 min
10 sztuk				
Spice	gałka muszkatolowa mielona	10 g	Boil	15 min
Spice	skórka pomarańczy	15 g	Boil	15 min
Spice	kakao	10 g	Boil	15 min