

# Black XMAS

- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **30**
- SRM **31.6**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.4 liter(s) / kg**
- Mash size **20.9 liter(s)**
- Total mash volume **29.6 liter(s)**

## Steps

- Temp **40 C**, Time **0 min**
- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **20.9 liter(s)** of strike water to **44.2C**
- Add grains
- Keep mash **0 min** at **40C**
- Keep mash **20 min** at **63C**
- Keep mash **45 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **29.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.5 kg (27.8%)	79 %	6
Grain	Strzegom Monachijski typ I	2.5 kg (27.8%)	79 %	16
Grain	Strzegom Karmel 150	2.5 kg (27.8%)	75 %	150
Grain	Pszeniczny	0.5 kg (5.6%)	85 %	4
Grain	Jęczmień palony	0.3 kg (3.3%)	55 %	985
Grain	Płatki owsiane	0.4 kg (4.4%)	85 %	3
Sugar	Milk Sugar (Lactose)	0.3 kg (3.3%)	76.1 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	250 ml	Safale

## Extras

Type	Name	Amount	Use for	Time
Flavor	cynamon	3 g	Boil	15 min
Flavor	goździki	5 g	Boil	15 min
Flavor	kardamon	5 g	Boil	15 min
Flavor	curaco	25 g	Boil	15 min

## Notes

- goździki - 5 szt  
kardamon - 5 ziaren  
cynamon kora - 3 cm  
curacao - 25 g  
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