

X-MAS

- Gravity **18.9 BLG**
- ABV ---
- IBU **20**
- SRM **49.3**
- 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 **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **62 C**, Time **10 min**
- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **10 min** at **62C**
- Keep mash **40 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (62.5%)	79 %	6
Grain	Żytni	0.5 kg (7.8%)	85 %	8
Grain	Czekoladowy	0.2 kg (3.1%)	60 %	788
Adjunct	Płatki Owsiane Błyskawiczne	0.5 kg (7.8%)	--- %	---
Grain	Jęczmień palony	0.3 kg (4.7%)	55 %	985
Grain	Weyermann - Carafa II	0.2 kg (3.1%)	70 %	837
Grain	Strzegom Karmel 150	0.2 kg (3.1%)	75 %	150
Sugar	Milk Sugar (Lactose)	0.5 kg (7.8%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Sybilla	60 g	55 min	3.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew T-58	Ale	Dry	11.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Spice	Cynamon	15 g	Boil	10 min
Spice	Anyż	4 g	Boil	10 min
Spice	Goździki	1 g	Boil	10 min
Spice	Kardamon	5 g	Boil	10 min
Spice	Gałka Muszkatołowa	4 g	Boil	10 min
Spice	skórka pomarańczy	5 g	Boil	10 min
Flavor	Płatki Dębowe	50 g	Secondary	14 day(s)