

## X-MAS 2.0

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **34**
- SRM **32.9**
- 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 **15 %/h**
- Boil size **27.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2.5 kg (39.7%)	85 %	7
Grain	Strzegom Pale Ale	1 kg (15.9%)	79 %	6
Grain	Strzegom Pszeniczny	1 kg (15.9%)	81 %	6
Grain	Biscuit Malt	0.3 kg (4.8%)	79 %	45
Grain	Strzegom Czekoladowy ciemny	0.5 kg (7.9%)	68 %	1200
Grain	Weyermann - Carared	1 kg (15.9%)	75 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Endeavour	20 g	60 min	7.5 %
Boil	HBC 472	15 g	20 min	9.3 %
Boil	Endeavour	15 g	20 min	7.5 %
Aroma (end of boil)	HBC 472	15 g	5 min	9.3 %
Aroma (end of boil)	Endeavour	15 g	5 min	7.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale BE-256	Ale	Dry	11.5 g	---

### Extras

Type	Name	Amount	Use for	Time
Flavor	skórka pomarańczy	50 g	Boil	20 min
Flavor	zest z pomarańczy	40 g	Boil	20 min
Flavor	przyprawa do piernika	40 g	Boil	20 min

Flavor	kakao	20 g	Boil	20 min
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