X-MAS

- Gravity **17.3 BLG**
- ABV **---**
- IBU **35**
- SRM **24.9**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **73 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **30.4 liter(s)**

Steps

- Temp **68 C**, Time **80 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **80 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	5 kg *(65.8%)*	80 %	8
Grain	Pszeniczny	1 kg *(13.2%)*	85 %	4
Grain	Monachijski	1 kg *(13.2%)*	80 %	16
Grain	Strzegom Karmel 300	0.5 kg *(6.6%)*	70 %	299
Grain	Czekoladowy	0.1 kg *(1.3%)*	60 %	788

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	10 %
Whirlpool	Sybilla	50 g	30 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
T58	Ale	Dry	11.5 g	safale

Extras

Type	Name	Amount	Use for	Time
Spice	cynamon	10 g	Boil	10 min

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Spice	anyz	1 g	Boil	10 min
Flavor	sliwki suszone	215 g	Boil	10 min
Flavor	miod gryczany	300 g	Boil	10 min
Spice	gozdziki	2 g	Boil	10 min
Spice	zest z pomaranczy	100 g	Boil	10 min
Flavor	platki jęczmienne	400 g	Mash	90 min