

Xmas

- Gravity **21.8 BLG**
- ABV **9.8 %**
- IBU **33**
- SRM **44.1**
- Style **Baltic Porter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **26.1 liter(s)**
- Total mash volume **34.8 liter(s)**

Steps

- Temp **48 C**, Time **5 min**
- Temp **52 C**, Time **5 min**
- Temp **60 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **26.1 liter(s)** of strike water to **52.7C**
- Add grains
- Keep mash **5 min** at **48C**
- Keep mash **5 min** at **52C**
- Keep mash **40 min** at **60C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **10.2 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	3 kg (34.5%)	79 %	16
Grain	Strzegom Monachijski typ II	2.3 kg (26.4%)	79 %	22
Grain	Strzegom Wiedeński	1 kg (11.5%)	79 %	10
Grain	Pilzneński	1 kg (11.5%)	81 %	4
Grain	cara Bohemian	0.4 kg (4.6%)	68 %	220
Grain	Strzegom Karmel 600	0.4 kg (4.6%)	68 %	601
Grain	Strzegom Czekoladowy jasny	0.2 kg (2.3%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.2 kg (2.3%)	68 %	1200
Grain	Weyermann - Carafa II	0.2 kg (2.3%)	70 %	1250

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	35 g	60 min	11 %
Boil	Lublin (Lubelski)	30 g	10 min	4 %
Boil	Lublin (Lubelski)	10 g	5 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	350 ml	Fermentis

Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	4 g	Boil	15 min
Spice	cynamon	7 g	Boil	10 min
Spice	goździk	5 g	Boil	10 min
Spice	skórka pomarańczy	10 g	Boil	10 min