

Merry Christmas

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **59**
- SRM **18.8**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **30 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **24 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **11 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (83.3%)	80 %	5
Grain	Strzegom Karmel 300	0.5 kg (8.3%)	70 %	299
Grain	Strzegom Monachijski typ II	0.35 kg (5.8%)	79 %	22
Grain	Jęczmień palony	0.15 kg (2.5%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	13.5 %
Boil	Lublin (Lubelski)	20 g	60 min	4 %
Boil	Lublin (Lubelski)	80 g	15 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Spice	imbir	17 g	Boil	15 min
Spice	cynamon	17 g	Boil	15 min
Spice	goździki	7 g	Boil	15 min
Spice	kardamon	10 g	Boil	15 min
Spice	przyprawa do piernika	17 g	Boil	15 min