Piwo świąteczne – Christmas Ale

- Gravity **19.6 BLG**
- ABV **8.6 %**
- IBU **36**
- SRM **40.9**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **16.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **21.8 liter(s)**

Steps

- Temp **53 C**, Time **15 min**
- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **17 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **50 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **4.5 liter(s)** of **76C** water or to achieve **16.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg *(51.5%)*	80 %	5
Grain	Viking Munich Malt	1 kg *(20.6%)*	78 %	18
Grain	Strzegom Karmel 150	0.5 kg *(10.3%)*	75 %	150
Grain	Strzegom Karmel 30	0.25 kg *(5.2%)*	75 %	30
Grain	Strzegom Czekoladowy jasny	0.25 kg *(5.2%)*	68 %	400
Grain	Strzegom Barwiący	0.25 kg *(5.2%)*	68 %	1300
Grain	Strzegom Karmel 300	0.1 kg *(2.1%)*	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	10 %
Aroma (end of boil)	Marynka	20 g	20 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis Safale US-05	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Spice	imbir	30 g	Boil	60 min
Spice	cynamon	30 g	Boil	10 min
Spice	gałka muszkatołowa	5 g	Boil	10 min
Spice	anyż	7.5 g	Boil	10 min
Spice	goździki	5 g	Boil	10 min
Spice	kardamon	5 g	Boil	10 min
Flavor	miód gryczany	350 g	Boil	10 min
Fining	mech irlandzki	5 g	Boil	15 min