

## Pod choinkę.

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **20**
- SRM **59.3**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.9 liter(s)**
- Total mash volume **13.2 liter(s)**

### Steps

- Temp **64 C**, Time **20 min**
- Temp **68 C**, Time **40 min**
- Temp **76 C**, Time **20 min**

### Mash step by step

- Heat up **9.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **76C**
- Sparge using **8.6 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	2.1 kg (58.3%)	79 %	10
Grain	Strzegom Czekoladowy ciemny	0.3 kg (8.3%)	68 %	1200
Grain	Melanoiden Malt	0.2 kg (5.6%)	80 %	39
Grain	Strzegom Karmel 600	0.5 kg (13.9%)	68 %	601
Liquid Extract	Miód Gryczany (Buckwheat Honey)	0.3 kg (8.3%)	70 %	40
Grain	Strzegom Czekoladowy ciemny	0.2 kg (5.6%)	68 %	1200

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mandarina Bavaria	10 g	60 min	10 %
Aroma (end of boil)	Mandarina Bavaria	10 g	5 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	7 g	---

## Extras

Type	Name	Amount	Use for	Time
Spice	cynamon	3 g	Boil	60 min
Spice	goździk	3 g	Boil	60 min
Spice	kardamon	3 g	Boil	60 min
Spice	skórka pom	4 g	Boil	60 min
Spice	gałka muszk	2 g	Boil	60 min