

## #9 Robust (Imperial) Porter - świąteczny

- Gravity **19.6 BLG**
- ABV **8.6 %**
- IBU **48**
- SRM **24.7**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.7 liter(s)**
- Boil time **110 min**
- Evaporation rate **20 %/h**
- Boil size **22 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **14.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (72.9%)	80 %	5
Grain	Karmelowy Jasny 30EBC	0.5 kg (10.4%)	75 %	30
Grain	Karamel Pils Steinbach	0.5 kg (10.4%)	79 %	6
Grain	Czekoladowy	0.15 kg (3.1%)	60 %	788
Grain	Barwiący	0.15 kg (3.1%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	13.5 %
Whirlpool	Northdown	25 g	0 min	8.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	200 ml	Safale

### Extras

Type	Name	Amount	Use for	Time
Spice	brandy Budafok	100 g	Secondary	---

Spice	skórki z pomarańczy (1)	20 g	Secondary	---
Spice	8 goździków	5 g	Secondary	---
Spice	kilka sztuk kardamonów (całych)	5 g	Secondary	---
Spice	laska wanilii	15 g	Secondary	---
Spice	laska cynamonu	10 g	Secondary	---
Spice	4 szczypty przyprawy do pieńnika	5 g	Secondary	---

## Notes

- BLG przed fermentacją - 20.  
Fermentacja burzliwa - 28 dni.  
Cicha - nie wiem ile.  
Macerat "moczył się" przez 4 doby, potem wlany do piwa na cichej.

BLG po fermentacji między 6,5-7.  
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