

Świąteczne Żytne Ale

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **28**
- SRM **6.9**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **45 min**
- Evaporation rate **10 %/h**
- Boil size **24.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytne Viking Malt	2 kg (33.3%)	81 %	7
Grain	Pale Ale Viking malt	3 kg (50%)	80 %	5
Grain	Słód Karmelowy 30 Viking Malt	1 kg (16.7%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	30 g	55 min	8.5 %
Aroma (end of boil)	Cascade USA	12 g	15 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM12 W szkocką kratę	Ale	Slant	1000 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Spice	Przyprawy	20 g	Boil	15 min