

piernikowe ale

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **65**
- SRM **12.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **11.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **12.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **15.9 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (75%)	80 %	4
Grain	Caramel/Crystal Malt	0.5 kg (12.5%)	75 %	150
Grain	Pszeniczny	0.5 kg (12.5%)	85 %	4.2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	30 min	9.5 %
Boil	Marynka	25 g	15 min	9.5 %
Boil	Marynka	50 g	5 min	9.5 %
Aroma (end of boil)	Citra	50 g	0 min	12.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
s04	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Spice	do piernika	12 g	Boil	5 min
Spice	goździki	2 g	Boil	5 min