

Piernikowate święta

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **6**
- SRM **11.6**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **2 %**
- Size with trub loss **30.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **32.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24.6 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **70.9C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **21.5 liter(s)** of **76C** water or to achieve **32.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.25 kg (33.8%)	81 %	4
Grain	Briess - Pale Ale Malt	2.1 kg (31.6%)	80 %	7
Grain	Monachijski	1.3 kg (19.5%)	80 %	16
Grain	Strzegom Bursztynowy	0.85 kg (12.8%)	70 %	49
Grain	Briess - Chocolate Malt	0.15 kg (2.3%)	60 %	690

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hersbrucker	15 g	60 min	3 %
Boil	Tettnang	10 g	30 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Spice	imbir	10 g	Boil	10 min
Spice	cynamion	5 g	Boil	10 min
Spice	kolendra	10 g	Boil	10 min
Spice	goździki	10 g	Boil	10 min
Spice	gałka muszkatałowa	10 g	Boil	10 min
Spice	ziele angielskie	10 g	Boil	10 min