Piernikowe

- Gravity **15 BLG**
- ABV **---**
- IBU **20**
- SRM **28.8**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **10 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **24.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.4 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.3 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	3.4 kg *(66.7%)*	81 %	4
Grain	Weyermann pszeniczny jasny	1 kg *(19.6%)*	80 %	6
Grain	Carahell	0.3 kg *(5.9%)*	77 %	26
Grain	Cararoma	0.2 kg *(3.9%)*	--- %	400
Grain	Carafa III	0.08 kg *(1.6%)*	70 %	1034
Grain	Jęczmień palony	0.12 kg *(2.4%)*	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Kent Goldings	30 g	70 min	5.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew T- 58	Ale	Dry	11.5 g	Safbrew

Extras

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Spice	Kardamon	4 g	Boil	15 min
Spice	Cynamon	5 g	Boil	15 min
Spice	Imbir	5 g	Boil	15 min
Spice	Ziele angielskie	3 g	Boil	15 min
Spice	Goździki	10 g	Boil	15 min
Spice	Gałka muszkatołowa	3 g	Boil	15 min