

Imperialny piernik

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **41**
- SRM **55.7**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.6 liter(s)**
- Total mash volume **8.8 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **6.6 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Liquid Extract	ekstrakt słodowy ciemny Bruntal	1.7 kg (43.6%)	90 %	621
Grain	Briess - Pale Ale Malt	1.5 kg (51.3%)	80 %	7
Grain	Abbey Malt Weyermann	0.5 kg (5.1%)	75 %	45

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	15 g	10 min	4.5 %
Boil	East Kent Goldings	15 g	10 min	5.1 %
Boil	Magnum	20 g	60 min	13.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us 05	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
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Spice	Gałka muszkatułowa	5 g	Secondary	5 day(s)
Spice	Cynamon	5 g	Secondary	5 day(s)
Spice	Imbir	5 g	Secondary	5 day(s)