

# 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 |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|       |                    |     |           |          |
|-------|--------------------|-----|-----------|----------|
| 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) |