

# Świąteczne

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **54**
- SRM **32.3**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **30.5 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **23.4 liter(s)** of strike water to **75.3C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount        | Yield | EBC  |
|-------|-----------------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt        | 5 kg (70.4%)  | 80 %  | 5    |
| Grain | Płatki owsiane              | 0.4 kg (5.6%) | 85 %  | 3    |
| Grain | Płatki żytnie               | 0.2 kg (2.8%) | 85 %  | 8    |
| Grain | Strzegom Karmel 150         | 1 kg (14.1%)  | 75 %  | 150  |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (4.2%) | 68 %  | 1200 |
| Grain | Jęczmień palony             | 0.2 kg (2.8%) | 55 %  | 985  |

## Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Magnum            | 50 g   | 60 min | 12 %       |
| Boil    | Mandarina Bavaria | 10 g   | 15 min | 8.6 %      |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.2 g | Fermentis  |

## Extras

| Type   | Name              | Amount | Use for   | Time     |
|--------|-------------------|--------|-----------|----------|
| Spice  | Imbir             | 10 g   | Boil      | 15 min   |
| Spice  | Cynamon           | 5 g    | Boil      | 15 min   |
| Spice  | Goździki          | 1 g    | Boil      | 15 min   |
| Flavor | Skórka pomarańczy | 20 g   | Secondary | 4 day(s) |
| Spice  | Imbir             | 5 g    | Secondary | 4 day(s) |
| Spice  | Cynamon           | 5 g    | Secondary | 4 day(s) |
| Spice  | Goździki          | 1 g    | Secondary | 4 day(s) |
| Spice  | Anyż nasiona      | 1 g    | Secondary | 4 day(s) |