

## Pod choinkę.

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **20**
- SRM **59.3**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.9 liter(s)**
- Total mash volume **13.2 liter(s)**

### Steps

- Temp **64 C**, Time **20 min**
- Temp **68 C**, Time **40 min**
- Temp **76 C**, Time **20 min**

### Mash step by step

- Heat up **9.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **76C**
- Sparge using **8.6 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

| Type           | Name                            | Amount         | Yield | EBC  |
|----------------|---------------------------------|----------------|-------|------|
| Grain          | Strzegom Wiedeński              | 2.1 kg (58.3%) | 79 %  | 10   |
| Grain          | Strzegom Czekoladowy ciemny     | 0.3 kg (8.3%)  | 68 %  | 1200 |
| Grain          | Melanoiden Malt                 | 0.2 kg (5.6%)  | 80 %  | 39   |
| Grain          | Strzegom Karmel 600             | 0.5 kg (13.9%) | 68 %  | 601  |
| Liquid Extract | Miód Gryczany (Buckwheat Honey) | 0.3 kg (8.3%)  | 70 %  | 40   |
| Grain          | Strzegom Czekoladowy ciemny     | 0.2 kg (5.6%)  | 68 %  | 1200 |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Mandarina Bavaria | 10 g   | 60 min | 10 %       |
| Aroma (end of boil) | Mandarina Bavaria | 10 g   | 5 min  | 10 %       |

### Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale  | Dry  | 7 g    | ---        |

## Extras

| Type  | Name        | Amount | Use for | Time   |
|-------|-------------|--------|---------|--------|
| Spice | cynamon     | 3 g    | Boil    | 60 min |
| Spice | goździk     | 3 g    | Boil    | 60 min |
| Spice | kardamon    | 3 g    | Boil    | 60 min |
| Spice | skórka pom  | 4 g    | Boil    | 60 min |
| Spice | gałka muszk | 2 g    | Boil    | 60 min |