

Świąteczne

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **16**
- SRM **27.9**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|-------|------|
| Grain | Strzegom Pilzneński | 4 kg (62.5%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ I | 1 kg (15.6%) | 79 % | 16 |
| Grain | Strzegom Karmel 150 | 0.2 kg (3.1%) | 75 % | 150 |
| Grain | Strzegom Karmel 300 | 0.2 kg (3.1%) | 70 % | 299 |
| Grain | Strzegom Czekoladowy jasny | 0.4 kg (6.2%) | 68 % | 400 |
| Grain | Strzegom Barwiący | 0.2 kg (3.1%) | 68 % | 1300 |
| Grain | Płatki owsiane | 0.4 kg (6.2%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 50 g | 30 min | 4 % |
| Boil | Willamette | 15 g | 10 min | 5.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------------|---------------|----------------|-------------|
| Spice | Przyprawa do piernika | 70 g | Boil | 10 min |