

Świąteczne Z

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **26**
- SRM **50.5**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Słód pale ale Viking Malt | 5 kg (80.6%) | --- % | 5 |
| Grain | Carafa III | 0.6 kg (9.7%) | 70 % | 1034 |
| Grain | Strzegom Czekoladowy ciemny | 0.6 kg (9.7%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 60 g | 60 min | 4.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------------------|--------|---------|--------|
| Flavor | laktoza | 500 g | Boil | 15 min |
| Other | Wanilia laska | 3 g | Boil | 15 min |
| Spice | Skórka pomarańczy | 20 g | Boil | 15 min |

| | | | | |
|-------|------------------|------|------|--------|
| Spice | Goździki | 5 g | Boil | 15 min |
| Spice | Cynamon | 5 g | Boil | 15 min |
| Spice | Cukier waniliowy | 15 g | Boil | 15 min |