

Świąteczne ciemne

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **34**
- SRM **18.1**

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 **27.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **69 C**, Time **45 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **15.6 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **45 min** at **69C**
- Keep mash **10 min** at **72C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Pilzneński | 3 kg (52.5%) | 81 % | 4 |
| Grain | Pszeniczny | 1 kg (17.5%) | 85 % | 4 |
| Grain | Strzegom Karmel 150 | 0.5 kg (8.8%) | 75 % | 150 |
| Grain | Płatki owsiane | 0.5 kg (8.8%) | 85 % | 3 |
| Grain | Jęczmień palony | 0.12 kg (2.1%) | 55 % | 985 |
| Grain | Barwiący | 0.09 kg (1.6%) | 55 % | 985 |
| Sugar | Cukier | 0.5 kg (8.8%) | --- % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 30 g | 15 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale T-58 | Ale | Dry | 11.5 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|-------|--------------------|-------|------|--------|
| Spice | Cukier waniliowy | 16 g | Boil | 15 min |
| Spice | Cynamon | 7 g | Boil | 15 min |
| Spice | Gałka muszkatołowa | 6 g | Boil | 15 min |
| Spice | Sliwki suszone | 300 g | Boil | 15 min |
| Spice | Skórka pomarańczy | 20 g | Boil | 15 min |
| Spice | Goździki | 5 g | Boil | 15 min |