

Świąteczny czarny płyn 2

- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **36**
- SRM **48.8**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **29 liter(s)**
- Total mash volume **37.2 liter(s)**

Steps

- Temp **63 C**, Time **20 min**
- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **29 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **30 min** at **66C**
- Keep mash **20 min** at **72C**
- Sparge using **4.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|-----------------|-------|------|
| Grain | Strzegom Wiedeński | 3 kg (36.3%) | 79 % | 10 |
| Grain | Monachijski | 3 kg (36.3%) | 80 % | 16 |
| Grain | Strzegom pszenica prażona | 0.75 kg (9.1%) | 70 % | 1000 |
| Grain | Carafa III | 0.325 kg (3.9%) | 70 % | 1034 |
| Grain | Płatki pszeniczne | 0.5 kg (6%) | 85 % | 3 |
| Grain | Melanoiden Malt | 0.2 kg (2.4%) | 80 % | 39 |
| Grain | Płatki owsiane | 0.5 kg (6%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 10 % |
| Boil | Tradition | 20 g | 60 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11.5 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------|--------------------|--------|---------|--------|
| Spice | kardamon | 4 g | Boil | 20 min |
| Spice | anyż gwieździsty | 10 g | Boil | 20 min |
| Spice | Laska cynamonu | 15 g | Boil | 20 min |
| Spice | wanilia | 5 g | Boil | 20 min |
| Spice | goździki | 10 g | Boil | 20 min |
| Spice | gałka muszkatałowa | 3 g | Boil | 20 min |