

Ciemny Wdowiec

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **30**
- SRM **27.3**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **23.3 liter(s)**
- Total mash volume **32.5 liter(s)**

Steps

- Temp **68 C**, Time **80 min**

Mash step by step

- Heat up **23.3 liter(s)** of strike water to **77.6C**
- Add grains
- Keep mash **80 min** at **68C**
- Sparge using **20.2 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Strzegom Pale Ale | 8 kg (86%) | 79 % | 6 |
| Grain | Strzegom Monachijski typ I | 0.4 kg (4.3%) | 79 % | 16 |
| Grain | Strzegom Bursztynowy | 0.4 kg (4.3%) | 70 % | 49 |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (5.4%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------|--------|--------|------------|
| Boil | Nadwiślański | 55 g | 60 min | 5.9 % |
| Boil | Tradition | 30 g | 0 min | 5.5 % |
| Boil | Tradition | 20 g | 60 min | 5.5 % |