

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 %