

Polskie Ciemności

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **88**
- SRM **45.3**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **12.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

Steps

- Temp **66 C**, Time **55 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **8.7 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **55 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **7 liter(s)** of **76C** water or to achieve **12.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.5 kg (51.7%)	80 %	5
Grain	Pszeniczny	0.5 kg (17.2%)	85 %	4
Grain	Karmelowy Pszeniczny Strzegom	0.3 kg (10.3%)	79 %	130
Grain	Caraaroma	0.3 kg (10.3%)	78 %	400
Grain	Strzegom Czekoladowy ciemny	0.3 kg (10.3%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	10 g	60 min	11.2 %
Boil	Marynka	10 g	60 min	10 %
Boil	lunga	10 g	30 min	11 %
Boil	Magnat	10 g	30 min	11.2 %
Aroma (end of boil)	Lublin (Lubelski)	30 g	10 min	4 %
Whirlpool	Magnat	30 g	0 min	11.2 %

Yeasts

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