

## Próba w Ciemno v2.0

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **54**
- SRM **26.4**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **7 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **64 C**, Time **70 min**
- Temp **80 C**, Time **1 min**

### Mash step by step

- Heat up **19.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **70 min** at **64C**
- Keep mash **1 min** at **80C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	6 kg (85.7%)	80 %	4
Grain	Jęczmień palony	0.5 kg (7.1%)	55 %	985
Sugar	Candi Sugar, Clear	0.5 kg (7.1%)	78.3 %	2

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	30 g	60 min	13 %
Aroma (end of boil)	El Dorado	15 g	15 min	15 %
Aroma (end of boil)	Amarillo	15 g	15 min	9.5 %
Whirlpool	El Dorado	15 g	1 min	15 %
Whirlpool	Amarillo	15 g	---	9.5 %
Dry Hop	Citra	50 g	3 day(s)	12 %
Whirlpool	Simcoe	50 g	3 min	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Culture	500 g	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	2.5 g	Boil	10 min