

## Ciemny test

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **89**
- SRM **26.9**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 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 **66 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **19.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **75C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (76.9%)	79 %	6
Grain	Caraaroma	0.5 kg (7.7%)	78 %	400
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.1%)	68 %	1200
Grain	Pszeniczny	0.5 kg (7.7%)	85 %	4
Grain	Strzegom Karmel 300	0.3 kg (4.6%)	70 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Summit	50 g	5 min	17 %
Boil	Waimea	30 g	60 min	17 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale