

## black mirror

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- Gravity **17.5 BLG**
- ABV **7.5 %**
- IBU **50**
- SRM **42.3**
- 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 **90 min**
- Evaporation rate **10 %/h**
- Boil size **29.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **32.8 liter(s)**

### Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **24.8 liter(s)** of strike water to **75.7C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **1 min** at **78C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	4.03 kg (50.4%)	80 %	7
Grain	Żytni	0.8 kg (10%)	85 %	8
Grain	Płatki owsiane	0.8 kg (10%)	85 %	3
Grain	Strzegom pszenica prażona	0.3 kg (3.8%)	70 %	50
Grain	Strzegom Czekoladowy ciemny	0.4 kg (5%)	68 %	1200
Grain	Jęczmień palony	0.4 kg (5%)	55 %	985
Grain	Weyermann Caramunich 3	0.8 kg (10%)	76 %	150
Grain	Pszoniczny	0.46 kg (5.8%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galena	42 g	60 min	14 %
Boil	CASHMERE	50 g	1 min	8.8 %
Dry Hop	CASHMERE	50 g	3 day(s)	8.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Wyeast - London Ale	Ale	Slant	230 ml	---
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### Extras

Type	Name	Amount	Use for	Time
Herb	liscie cafiru	8 g	Secondary	7 day(s)