

## Black cascade ipa

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **46**
- SRM **16**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.8 liter(s)**
- Total mash volume **13 liter(s)**

### Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

### Mash step by step

- Heat up **9.8 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Sparge using **7.3 liter(s)** of **76C** water or to achieve **13.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (92.3%)	81 %	4
Grain	Biscuit Malt	0.1 kg (3.1%)	79 %	45
Grain	Weyermann Caramunich 3	0.05 kg (1.5%)	76 %	150
Grain	Jęczmień palony	0.075 kg (2.3%)	55 %	985
Grain	Black (Patent) Malt	0.025 kg (0.8%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Dry Hop	Cascade	50 g	---	6 %
Boil	Lublin (Lubelski)	25 g	15 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM50 Kłosy Kansas	Ale	Slant	150 ml	Fermentum Mobile