

BLACK FLAG II

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **63**
- SRM **30.7**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **52.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **26.8 liter(s)**
- Total mash volume **37.5 liter(s)**

Steps

- Temp **66 C**, Time **60 min**

Mash step by step

- Heat up **26.8 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **36.7 liter(s)** of **76C** water or to achieve **52.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	6 kg (56.1%)	85 %	7
Grain	Carahell	2 kg (18.7%)	77 %	26
Grain	Weyermann - Carapils	1 kg (9.3%)	78 %	4
Grain	Jęczmień palony	0.2 kg (1.9%)	55 %	985
Grain	Czekoladowy	1 kg (9.3%)	60 %	788
Grain	Carafa II	0.2 kg (1.9%)	70 %	812
Grain	Płatki owsiane	0.3 kg (2.8%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	60 g	60 min	15.5 %
Boil	Cascade	60 g	30 min	6 %
Dry Hop	Mosaic	90 g	7 day(s)	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	22 g	Fermentis