

Black ipa

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **72**
- SRM **24.6**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **48 liter(s)**
- Trub loss **5 %**
- Size with trub loss **50.4 liter(s)**
- Boil time **75 min**
- Evaporation rate **5 %/h**
- Boil size **56.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **48 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	8 kg (66.7%)	81 %	4
Grain	Weyermann - Carared	1 kg (8.3%)	75 %	45
Grain	Weyermann - Carafa I	1 kg (8.3%)	70 %	900
Grain	Płatki owsiane	1 kg (8.3%)	85 %	3
Grain	Żytni	1 kg (8.3%)	85 %	8

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	50 min	15.5 %
Boil	Chinook	50 g	20 min	13 %
Boil	Chinook	50 g	10 min	13 %
Boil	Simcoe	50 g	15 min	13.2 %
Boil	Simcoe	50 g	5 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - American Ale	Ale	Slant	100 ml	Wyeast Labs

Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	5 g	Boil	10 min