

black ipa

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **68**
- SRM **34.4**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **14.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	4 kg (88.9%)	80 %	7
Grain	Carafa III	0.3 kg (6.7%)	70 %	1034
Grain	Briess - Chocolate Malt	0.2 kg (4.4%)	60 %	690

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	15.5 %
Boil	Azacca	20 g	20 min	14 %
Aroma (end of boil)	Azacca	25 g	0 min	14 %
Dry Hop	Azacca	30 g	7 day(s)	14 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	---