

# Black IPA

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **82**
- SRM **28.8**
- Style **American 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 **5 %/h**
- Boil size **48.3 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33.9 liter(s)**
- Total mash volume **45.2 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **33.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **25.7 liter(s)** of **76C** water or to achieve **48.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	10 kg (88.5%)	80 %	5
Grain	Caramel/Crystal Malt - 10L	0.3 kg (2.7%)	75 %	8
Grain	Carafa III	1 kg (8.8%)	70 %	1034

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	80 g	60 min	15.5 %
Aroma (end of boil)	Enigma (AUS)	20 g	10 min	17.2 %
Aroma (end of boil)	Vic Secret	20 g	10 min	16.3 %
Aroma (end of boil)	Enigma (AUS)	30 g	5 min	17.2 %
Aroma (end of boil)	Vic Secret	30 g	5 min	16.3 %
Aroma (end of boil)	Enigma (AUS)	50 g	0 min	17.2 %
Aroma (end of boil)	Vic Secret	50 g	0 min	16.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Vermont Ale	Ale	Slant	500 ml	Yeast Bay