

# BLACK IPA/CDA v10 #130

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **66**
- SRM **33.1**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **17.4 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.6 liter(s)**
- Boil time **80 min**
- Evaporation rate **24.2 %/h**
- Boil size **25 liter(s)**

## Mash information

- Mash efficiency **77.5 %**
- Liquor-to-grist ratio **2.85 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20.3 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **7 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale - viking	3.95 kg (74.9%)	80 %	5.5
Grain	Viking - pszeniczny	0.3 kg (5.7%)	83 %	5
Grain	Viking - monachijski II	0.392 kg (7.4%)	79 %	22
Grain	Chateau - Cara gold	0.2 kg (3.8%)	78 %	120
Grain	Weyermann - czekoladowy pszeniczny	0.18 kg (3.4%)	72.7 %	1000
Grain	Weyermann - Carafa II Special	0.162 kg (3.1%)	65 %	1150
Grain	Weyermann - Carafa III Special	0.088 kg (1.7%)	65 %	1400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	17 g	60 min	14.7 %
Aroma (end of boil)	Columbus	30 g	10 min	15.8 %
Aroma (end of boil)	Simcoe	25 g	5 min	12.9 %
Aroma (end of boil)	Centennial	30 g	5 min	10.5 %

Aroma (end of boil)	Michigan Copper	7.54 g	1 min	14.5 %
Aroma (end of boil)	Moutere	23 g	1 min	15.9 %
Dry Hop	Simcoe	55 g	2 day(s)	12.9 %
Dry Hop	Centennial	30 g	2 day(s)	10.5 %
Dry Hop	Columbus	20 g	2 day(s)	15.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	150 ml	Fermentum Mobile
gęstwa 30-dniowa				

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips	2 g	Mash	---
Water Agent	kwask mlekowy 80% [ml]	3.11 g	Mash	---
Water Agent	chlorek wapnia [ml]	0 g	Mash	---
Water Agent	węglan wapnia/kreda	6 g	Mash	---
Water Agent	sól epsom	1.5 g	Mash	---
Fining	irish moss	3 g	Boil	10 min
Water Agent	kwask askorbinowy	3.6 g	Bottling	---