

# BLACK IPA/CDA v11 #138

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **56**
- SRM **34.6**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **18.9 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.2 liter(s)**
- Boil time **80 min**
- Evaporation rate **20.5 %/h**
- Boil size **26 liter(s)**

## Mash information

- Mash efficiency **86 %**
- Liquor-to-grist ratio **2.83 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 **73C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **26 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pilzneński - viking	0.35 kg (6.6%)	80 %	3.6
Grain	pale ale - viking	3.6 kg (67.9%)	80 %	5.5
Grain	pszeniczny - bestmalz	0.3 kg (5.7%)	83 %	5
Grain	monachijski II - viking	0.4 kg (7.5%)	79 %	22
Grain	cara gold - chateau	0.066 kg (1.2%)	78 %	120
Grain	karmelowy300 - viking	0.134 kg (2.5%)	73 %	300
Grain	czekoladowy pszeniczny - fawcett	0.2 kg (3.8%)	72.7 %	1000
Grain	carafa III special - weyermann	0.25 kg (4.7%)	65 %	1400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	21 g	60 min	11.5 %
Aroma (end of boil)	Columbus	30 g	10 min	10.7 %
Aroma (end of boil)	Simcoe	25 g	5 min	12.9 %

Aroma (end of boil)	Moutere	30 g	5 min	15.9 %
Aroma (end of boil)	Amarillo	30 g	1 min	9.9 %
Dry Hop	Simcoe	35 g	2 day(s)	12.9 %
Dry Hop	Amarillo	30 g	2 day(s)	9.9 %
Dry Hop	Moutere	30 g	2 day(s)	15.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	175 ml	Fermentum Mobile
gęstwa 37-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	---