

Blak pIPA

- Gravity **15 BLG**
- ABV ---
- IBU **67**
- SRM **32**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (73.4%)	81 %	4
Grain	Carahell	0.25 kg (4.6%)	77 %	26
Grain	kawowy	0.5 kg (9.2%)	74 %	250
Grain	Carafa III	0.3 kg (5.5%)	70 %	1034
Grain	Caraaroma	0.3 kg (5.5%)	78 %	400
Sugar	Candi Sugar, Clear	0.1 kg (1.8%)	100 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Bravo	25 g	60 min	15.5 %
Boil	Willamette	25 g	25 min	5 %
Boil	Amarillo	10 g	25 min	9.5 %
Boil	Amarillo	10 g	10 min	9.5 %
Boil	Willamette	20 g	10 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Mangrove Jack's M42 New World Strong Ale	Ale	Dry	10 g	---
--	-----	-----	------	-----