black aipa tb 16blg

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **70**
- SRM **31.6**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **18 %/h**
- Boil size **30.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.5 liter(s)**
- Total mash volume **27.4 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **20.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5.75 kg *(83.9%)*	80 %	5
Grain	Strzegom Karmel 300	0.5 kg *(7.3%)*	70 %	299
Grain	Chocolate Malt (UK)	0.35 kg *(5.1%)*	73 %	887
Grain	Carafa II	0.25 kg *(3.6%)*	70 %	812

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	60 min	13 %
Boil	Bravo	25 g	60 min	15.5 %
Boil	El Dorado	25 g	20 min	15 %
Boil	Sabro	50 g	0 min	15 %
po wyłączeniu palnika 10 min				
Dry Hop	Sabro	50 g	3 day(s)	15 %