

Black Aipa

- Gravity **15.5 BLG**
- ABV ---
- IBU **76**
- SRM **40**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **26.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (83.3%)	79 %	6
Grain	Strzegom Karmel 300	0.1 kg (1.7%)	70 %	299
Grain	Strzegom Czekoladowy ciemny	0.3 kg (5%)	68 %	1200
Grain	black	0.2 kg (3.3%)	--- %	1300
Grain	Strzegom Karmel 300	0.4 kg (6.7%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Equinox	30 g	60 min	13.1 %
Boil	Sorachi Ace	15 g	60 min	10 %
Boil	Cascade	20 g	30 min	6 %
Boil	Cascade	30 g	15 min	6 %
Boil	Sorachi Ace	15 g	5 min	10 %
Boil	Cascade	20 g	5 min	6 %

Whirlpool	Cascade	30 g	0 min	6 %
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Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis