

Black IPA Single HOP Amarillo ver. 1

- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **60**
- SRM **36.4**
- Style **American 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 **20.9 liter(s)**
- Total mash volume **27.8 liter(s)**

Steps

- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **20.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (64.7%)	81 %	4
Grain	Strzegom Monachijski typ I	0.45 kg (6.5%)	79 %	16
Grain	Żytni	0.45 kg (6.5%)	85 %	8
Grain	Karmelowy żytni Strzegom	0.45 kg (6.5%)	75 %	150
Grain	Carafa III	0.45 kg (6.5%)	70 %	1034
Grain	Płatki owsiane	0.45 kg (6.5%)	85 %	3
Grain	Fawcett - Pszeniczny Czekoladowy	0.2 kg (2.9%)	73 %	1001

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Amarillo	15 g	60 min	8.9 %
Boil	Amarillo	45 g	30 min	8.9 %
Boil	Amarillo	45 g	15 min	8.9 %
Whirlpool	Amarillo	45 g	0 min	8.9 %
Dry Hop	Amarillo	45 g	4 day(s)	8.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	1000 ml	Fermentum Mobile
starter 1000 ml dekantowany				