

BIPA

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **64**
- SRM **14**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.1 liter(s)**
- Total mash volume **24.5 liter(s)**

Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **19.1 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (91.7%)	80 %	5
Grain	Strzegom Karmel 150	0.25 kg (4.6%)	75 %	140
Grain	Carafa II	0.2 kg (3.7%)	70 %	812

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	50 min	9.2 %
Boil	Green Bullet	20 g	30 min	12.2 %
Boil	Mandarina Bavaria	15 g	20 min	9.8 %
Boil	Mandarina Bavaria	25 g	10 min	9.8 %
Boil	Mandarina Bavaria	20 g	5 min	9.8 %
Dry Hop	Mandarina Bavaria	40 g	5 day(s)	9.8 %
Dry Hop	Green Bullet	20 g	5 day(s)	12.2 %

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
Spice	Skórka pomarańczowa	100 g	Boil	10 min