

## 9 BRO IPA

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **68**
- SRM **5.3**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (70%)	80 %	5
Grain	Strzegom Monachijski typ I	1.5 kg (30%)	79 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	50 g	30 min	15.5 %
Whirlpool	Palisade	50 g	5 min	7.5 %
Dry Hop	Citra	60 g	3 day(s)	12 %

### Yeasts

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

### Extras

Type	Name	Amount	Use for	Time
Spice	Blue curacao	30 g	Secondary	7 day(s)