

## 48# IPA

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **65**
- SRM **9.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss --- %
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **22.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **20.2 liter(s)**

### Steps

- Temp **54 C**, Time **10 min**
- Temp **68 C**, Time **70 min**

### Mash step by step

- Heat up **15.1 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **10 min** at **54C**
- Keep mash **70 min** at **68C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **22.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	2.5 kg (49.5%)	80 %	16
Grain	Pilzneński	2.2 kg (43.6%)	81 %	4
Grain	Strzegom Karmel 150	0.35 kg (6.9%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	35 g	60 min	15.5 %
Aroma (end of boil)	Cascade PL	35 g	5 min	5.2 %
Dry Hop	Mosaic	50 g	3 day(s)	10 %
Dry Hop	Cascade	50 g	3 day(s)	6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	150 ml	Fermentis