

## 45# IPA

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **63**
- SRM **5.6**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **24.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **23.6 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**
- Temp **79 C**, Time **1 min**

### Mash step by step

- Heat up **17.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Keep mash **1 min** at **79C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (76.3%)	81 %	4
Grain	Monachijski	0.7 kg (11.9%)	80 %	16
Grain	Carared	0.3 kg (5.1%)	75 %	39
Grain	Płatki owsiane	0.4 kg (6.8%)	60 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	50 g	60 min	9.1 %
Boil	East Kent Goldings	25 g	30 min	5.1 %
Boil	East Kent Goldings	25 g	15 min	5.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis