

## 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  |