

## 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  |