

# Minipa

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **68**
- SRM **4.9**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.4 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **16 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

| Type  | Name           | Amount         | Yield | EBC |
|-------|----------------|----------------|-------|-----|
| Grain | MEP Pale Ale   | 4.5 kg (84.1%) | 79 %  | 6   |
| Grain | Abbey Castle   | 0.25 kg (4.7%) | 80 %  | 45  |
| Grain | Platki owsiane | 0.6 kg (11.2%) | 85 %  | 3   |

## Hops

| Use for   | Name       | Amount | Time     | Alpha acid |
|-----------|------------|--------|----------|------------|
| Boil      | Simcoe     | 20 g   | 60 min   | 13.2 %     |
| Boil      | Simcoe     | 20 g   | 0 min    | 13.2 %     |
| Whirlpool | Centennial | 50 g   | 30 min   | 10.5 %     |
| Whirlpool | Simcoe     | 30 g   | 30 min   | 13.2 %     |
| Whirlpool | Amarillo   | 20 g   | 30 min   | 9.5 %      |
| Dry Hop   | Simcoe     | 30 g   | 4 day(s) | 13.2 %     |
| Dry Hop   | Mosaic     | 50 g   | 4 day(s) | 10 %       |
| Dry Hop   | Amarillo   | 30 g   | 4 day(s) | 9.5 %      |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 100 ml | Fermentum Mobile |