

# Ziarno goryczy

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **52**
- SRM **9.3**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **70 C**, Time **50 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **50 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount        | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt   | 5 kg (83.3%)  | 85 %  | 7   |
| Grain | Caramel/Crystal Malt - 40L  | 0.5 kg (8.3%) | 74 %  | 79  |
| Grain | Weyermann - Melanoiden Malt | 0.5 kg (8.3%) | 81 %  | 53  |

## Hops

| Use for | Name   | Amount | Time     | Alpha acid |
|---------|--------|--------|----------|------------|
| Boil    | Citra  | 50 g   | 5 min    | 12 %       |
| Boil    | Waimea | 100 g  | 5 min    | 17 %       |
| Dry Hop | Mosaic | 50 g   | 3 day(s) | 10 %       |
| Boil    | Mosaic | 50 g   | 5 min    | 10 %       |
| Dry Hop | Citra  | 50 g   | 3 day(s) | 12 %       |

## Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Liquid | 30 ml  | Fermentum Mobile |