

# 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