

# GRUDNIOWA IPA

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **28**
- SRM **4.1**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **5 %**
- Size with trub loss **66 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **75.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **44.6 liter(s)**
- Total mash volume **62.5 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **44.6 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **48.9 liter(s)** of **76C** water or to achieve **75.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	12 kg (67.2%)	80 %	4
Grain	Weyermann - Carapils	1 kg (5.6%)	78 %	4
Grain	Płatki owsiane	2 kg (11.2%)	85 %	3
Grain	Weyermann - Acidulated Malt	0.35 kg (2%)	80 %	6
Grain	weyermann - CARAAROMA	0.5 kg (2.8%)	70 %	---
Grain	Weyermann - Pale Ale Malt	2 kg (11.2%)	85 %	7

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	40 min	10 %
Boil	Marynka	30 g	30 min	10 %
Boil	Marynka	30 g	25 min	10 %
Whirlpool	Centennial	60 g	10 min	10.5 %

Whirlpool	Centennial	30 g	5 min	10.5 %
Aroma (end of boil)	Amarillo	60 g	1 min	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	33 g	Fermentis