

# Towarzysz Szmaciak

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- Gravity **14.7 BLG**
- ABV ---
- IBU **52**
- SRM **5.1**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **10 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **91 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **25.2 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **19.6 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **15 min** at **78C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

| Type  | Name                   | Amount       | Yield | EBC |
|-------|------------------------|--------------|-------|-----|
| Grain | Weyermann - Grodziski  | 2.8 kg (50%) | 80 %  | 4   |
| Grain | Briess - Pale Ale Malt | 2.8 kg (50%) | 80 %  | 7   |

## Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | Citra | 100 g  | 15 min | 12 %       |

## Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US 05 | Ale  | Dry  | 11 g   | ---        |

## Extras

| Type  | Name           | Amount | Use for | Time  |
|-------|----------------|--------|---------|-------|
| Other | Burak ćwikłowy | 5000 g | Boil    | 0 min |