

Towarzysz Szmaciak

- 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 |