

## #45 IPA

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **37**
- SRM **3.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22.3 liter(s)**
- Trub loss **0 %**
- Size with trub loss **22.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.9 liter(s)**

### Mash information

- Mash efficiency **81.5 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **16.6 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **12.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **18.6 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słodownia Strzegom - wędzony bukiem	0.1 kg (2.4%)	79 %	4
Grain	Weyermann - Acidulated Malt (zakwaszający)	0.05 kg (1.2%)	80 %	6
Grain	Malteurop - Pale Ale	4 kg (96.4%)	80 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Sorachi Ace	25 g	1 min	10 %
Boil	Warrior	10 g	60 min	15.9 %
Boil	Columbus/Tomahawk/Zeus	15 g	30 min	14.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM55 - Zielone wzgórze	Ale	Culture	200 g	---