

## Ipa kombinacja

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **73**
- SRM **5.8**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **16 %/h**
- Boil size **22.7 liter(s)**

### Mash information

- Mash efficiency **55 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

### Steps

- Temp **68 C**, Time **75 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **75 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **8.7 liter(s)** of **76C** water or to achieve **22.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2 kg (28.6%)	85 %	7
Grain	Pilzński	2 kg (28.6%)	81 %	4
Grain	Słód owsiany	1 kg (14.3%)	61 %	5
Grain	słód sahti	1 kg (14.3%)	81.9 %	4.4
Grain	Słód pszeniczny	1 kg (14.3%)	82 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	40 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	20 g	25 min	15.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	---