

# ipa1

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- Gravity **14.3 BLG**
- ABV ---
- IBU **65**
- SRM **9.9**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (70%)	80 %	4
Grain	Strzegom Karmel 150	0.3 kg (6%)	75 %	150
Grain	Żytni	1.2 kg (24%)	85 %	8

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	9.6 %
Aroma (end of boil)	Cascade	25 g	10 min	6 %
Boil	Amarillo	20 g	40 min	9.5 %
Boil	Centennial	20 g	30 min	10.5 %
Aroma (end of boil)	Willamette	25 g	5 min	5 %