

## IPA zacier 2

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **44**
- SRM **7.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **60 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **15 min** at **62C**
- Keep mash **60 min** at **72C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	3 kg (50%)	80 %	7
Grain	Briess - Munich Malt 10L	3 kg (50%)	77 %	22

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	20 min	16.5 %
Boil	Warrior	10 g	20 min	17.6 %
Boil	Mosaic	10 g	20 min	11.5 %
Boil	Citra	10 g	20 min	12 %
Boil	Mosaic	10 g	10 min	11.5 %
Boil	Citra	10 g	10 min	12 %
Boil	Mosaic	10 g	5 min	11.5 %
Boil	Citra	10 g	5 min	12 %
Boil	Mosaic	10 g	1 min	11.5 %
Boil	Centennial	25 g	1 min	9.4 %
Boil	Citra	10 g	1 min	12 %

Boil	Ahtanum	25 g	1 min	4.7 %
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## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Slant	500 ml	Fermentis Division of S.I.Lesaffre