

## ZACIERAPA\_3

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **42**
- SRM **4.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **30.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **30 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **30 min** at **76C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	5 kg (83.3%)	80 %	7
Grain	Pszeniczny	1 kg (16.7%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	10 g	60 min	13.5 %
Boil	CITRA	15 g	30 min	14.1 %
Boil	CITRA	15 g	15 min	14.1 %
Boil	Cascade_pl	15 g	15 min	4.5 %
Boil	Citra	10 g	5 min	14.1 %
Boil	Cascade_pl	10 g	5 min	4.5 %
Boil	Cascade_pl	10 g	0 min	4.5 %
Whirlpool	Citra	10 g	-3 min	14.1 %
Dry Hop	CITRA	50 g	4 day(s)	14.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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us-05	Ale	Slant	100 ml	ROBOT
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