

## C SHELL ZACIER

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **41**
- SRM **3.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **63 C**, Time **22 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **30 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **22 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **30 min** at **76C**
- Sparge using **21.4 liter(s)** of **76C** water or to achieve **33.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (83.3%)	80 %	5
Grain	Pszeniczny	1 kg (16.7%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	citra	12 g	60 min	12 %
Boil	Citra	15 g	30 min	12 %
Boil	citra	15 g	15 min	12 %
Boil	citra	15 g	10 min	12 %
Boil	citra	15 g	5 min	12 %
Boil	citra	15 g	0 min	12 %
Aroma (end of boil)	Citra	15 g	-3 min	12 %
Dry Hop	Citra	50 g	4 day(s)	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us05	Ale	Slant	100 ml	jo