

# Charming Solo

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **20**
- SRM **3.9**
- Style **Fruit Beer**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **4 %**
- Size with trub loss **24 liter(s)**
- Boil time **70 min**
- Evaporation rate **16 %/h**
- Boil size **29.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **25.2 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **19.6 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **29.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Ger	2.5 kg (44.6%)	81 %	4
Grain	Pszeniczny	2.5 kg (44.6%)	85 %	5
Grain	Płatki owsiane	0.6 kg (10.7%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	10 g	60 min	12.9 %
Aroma (end of boil)	Citra	25 g	5 min	14.2 %
Whirlpool	Citra	25 g	0 min	14.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Slant	100 ml	Fermentis