

## Whirlpool + 20 min

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- Gravity **19.1 BLG**
- ABV **8.3 %**
- IBU **38**
- SRM **5.3**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **22 %/h**
- Boil size **28.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **30.4 liter(s)**

### Steps

- Temp **67 C**, Time **70 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **22.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Golden Promise	3.5 kg (46.1%)	81 %	4
Grain	Rahr - Premium Pilsner Malt	2.2 kg (28.9%)	81 %	4
Grain	Strzegom Monachijski typ I	0.5 kg (6.6%)	79 %	16
Grain	Płatki owsiane	0.8 kg (10.5%)	85 %	3
Grain	Płatki pszeniczne	0.6 kg (7.9%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	5 g	60 min	13 %
Boil	Mosaic	10 g	20 min	10 %
Boil	Citra	10 g	20 min	13.5 %
Boil	Galaxy	10 g	20 min	15 %
Boil	Cascade	10 g	20 min	6 %
Boil	Mosaic	10 g	7 min	10 %
Boil	Citra	10 g	7 min	12 %
Boil	Galaxy	10 g	7 min	15 %

Boil	Cascade	10 g	7 min	6 %
Whirlpool	Mosaic	20 g	80 min	10 %
Whirlpool	Citra	20 g	80 min	13.5 %
Whirlpool	Galaxy	20 g	80 min	15 %
Whirlpool	cascade	20 g	80 min	7 %
Dry Hop	Cascade	60 g	6 day(s)	7 %
Dry Hop	Citra	60 g	6 day(s)	12 %
Dry Hop	Galaxy	60 g	6 day(s)	15 %
Dry Hop	Mosaic	60 g	6 day(s)	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - London Ale III	Ale	Liquid	100 ml	Wyeast Labs

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	4 g	Mash	60 min
Fining	mech	5 g	Boil	15 min

## Notes

- Hop stand od 82oC, Burzliwa 1/3 chmieli, cicha 2/3.  
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