

## 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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