

## #4 Zest fresh ale

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- Gravity **12.4 BLG**
- ABV ---
- IBU **68**
- SRM **5.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **14.1 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount         | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Pilzneński                 | 3 kg (63.8%)   | 81 %  | 4   |
| Grain | Weyermann pszeniczny jasny | 1 kg (21.3%)   | 80 %  | 6   |
| Grain | Weyermann - Carapils       | 0.5 kg (10.6%) | 78 %  | 4   |
| Grain | Carared                    | 0.2 kg (4.3%)  | 75 %  | 39  |

### Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 20 g   | 60 min | 15.5 %     |
| Boil    | Chinook                | 10 g   | 30 min | 13 %       |
| Boil    | Mosaic                 | 10 g   | 30 min | 10 %       |
| Boil    | Mosaic                 | 10 g   | 15 min | 10 %       |
| Boil    | Chinook                | 10 g   | 10 min | 13 %       |
| Boil    | Yellow Sub             | 10 g   | 1 min  | 6 %        |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|              |     |     |        |           |
|--------------|-----|-----|--------|-----------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |
|--------------|-----|-----|--------|-----------|

### Extras

| Type   | Name                          | Amount | Use for | Time  |
|--------|-------------------------------|--------|---------|-------|
| Flavor | Zest (grejpfrut oraz cytryna) | 75 g   | Boil    | 7 min |
| Flavor | Zest (grejpfrut oraz cytryna) | 75 g   | Boil    | 3 min |