

## GREEN EXPERIMENT

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **77**
- SRM **4**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **1500 liter(s)**
- Trub loss **5 %**
- Size with trub loss **1575 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **1897.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **1185 liter(s)**
- Total mash volume **1580 liter(s)**

### Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **1185 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **1107.5 liter(s)** of **76C** water or to achieve **1897.5 liter(s)** of wort

### Fermentables

| Type    | Name                              | Amount         | Yield | EBC |
|---------|-----------------------------------|----------------|-------|-----|
| Grain   | Weyermann - Bohemian Pilsner Malt | 275 kg (62.5%) | 81 %  | 4   |
| Grain   | Pszeniczny                        | 75 kg (17%)    | 85 %  | 4   |
| Grain   | Oats, Flaked                      | 45 kg (10.2%)  | 80 %  | 2   |
| Adjunct | Wheat, Flaked                     | 45 kg (10.2%)  | 77 %  | 4   |

### Hops

| Use for             | Name   | Amount | Time     | Alpha acid |
|---------------------|--------|--------|----------|------------|
| Aroma (end of boil) | Mosaic | 1700 g | 40 min   | 12.7 %     |
| Aroma (end of boil) | Citra  | 1700 g | 40 min   | 12.3 %     |
| Aroma (end of boil) | Galaxy | 1700 g | 40 min   | 14.2 %     |
| Dry Hop             | Mosaic | 3300 g | 9 day(s) | 2.7 %      |
| Dry Hop             | Galaxy | 3300 g | 7 day(s) | 14.2 %     |
| Dry Hop             | Citra  | 3300 g | 5 day(s) | 12.3 %     |

### Yeasts

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

|      |     |     |        |     |
|------|-----|-----|--------|-----|
| s-33 | Ale | Dry | 1000 g | --- |
|------|-----|-----|--------|-----|

## Extras

| Type        | Name           | Amount | Use for | Time   |
|-------------|----------------|--------|---------|--------|
| Water Agent | Gips           | 300 g  | Mash    | 60 min |
| Water Agent | Chlorek wapnia | 780 g  | Mash    | 60 min |
| Water Agent | Kwas mlekowy   | 100 g  | Mash    | 60 min |