

## #4

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **20**
- SRM **6.3**
- Style **Belgian IPA**

### Batch size

- Expected quantity of finished beer **16.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.8 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **19.1 liter(s)**
- Total mash volume **24.2 liter(s)**

### Steps

- Temp **62 C**, Time **50 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **19.1 liter(s)** of strike water to **67.7C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **21.8 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount          | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 2 kg (38.8%)    | 79 %  | 16  |
| Grain | Strzegom Pilzneński        | 1.8 kg (35%)    | 80 %  | 4   |
| Grain | Słód owsiany Castlemalting | 0.6 kg (11.7%)  | 80 %  | 5   |
| Grain | Płatki owsiane             | 0.75 kg (14.6%) | 60 %  | 3   |

### Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Marynka  | 10 g   | 60 min   | 10 %       |
| Aroma (end of boil) | Izabella | 5 g    | 15 min   | 5.1 %      |
| Aroma (end of boil) | Polaris  | 5 g    | 15 min   | 19 %       |
| Aroma (end of boil) | Izabella | 5 g    | 5 min    | 5.1 %      |
| Aroma (end of boil) | Polaris  | 5 g    | 5 min    | 19 %       |
| Dry Hop             | Izabella | 10 g   | 7 day(s) | 5.1 %      |
| Dry Hop             | Polaris  | 10 g   | 7 day(s) | 19 %       |

### Yeasts

| Name                               | Type | Form | Amount | Laboratory      |
|------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M31 Belgian Triple | Ale  | Dry  | 10 g   | Mangrove Jack's |

## Notes

- refermentacja w butelkach  
3.75 g cukru/L  
*Jun 11, 2020, 9:45 PM*