

## BRO #002.ver.2.3 American IPA MJ Liberty

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **47**
- SRM **6.3**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **24.4 liter(s)**

### Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **18.3 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount          | Yield | EBC |
|-------|---------------------|-----------------|-------|-----|
| Grain | Strzegom Pale Ale   | 3.65 kg (59.8%) | 79 %  | 6   |
| Grain | Strzegom Pilzneński | 1.82 kg (29.8%) | 80 %  | 4   |
| Grain | Pszeniczny          | 0.38 kg (6.2%)  | 85 %  | 4   |
| Grain | Caramunich® typ I   | 0.25 kg (4.1%)  | 73 %  | 80  |

### Hops

| Use for | Name                   | Amount  | Time   | Alpha acid |
|---------|------------------------|---------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 16.67 g | 60 min | 15.5 %     |
| Boil    | Eureka!                | 8.33 g  | 60 min | 18 %       |
| Boil    | HBC 342                | 8.33 g  | 20 min | 10.5 %     |
| Boil    | Citra                  | 16.67 g | 3 min  | 13.5 %     |

### Yeasts

| Name         | Type | Form | Amount | Laboratory      |
|--------------|------|------|--------|-----------------|
| Liberty Bell | Ale  | Dry  | 11 g   | Mangrove Jack's |

### Notes

- Wersja 1. (8l)

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

ananas suszony 25g  
Citra - 10g  
6 dni

Wersja 2. (13l)  
skórka gorzkiej pomarańczy 15g  
Citra - 15g  
6 dni  
*Mar 11, 2018, 9:50 AM*