

# Mafiozo- Black IPA z Ananasem

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **33**
- SRM **34.2**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **8 %**
- Size with trub loss **16.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **74 C**, Time **10 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **74C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount         | Yield | EBC  |
|-------|---------------------------|----------------|-------|------|
| Grain | Weyermann - Pale Ale Malt | 2.5 kg (62.5%) | 85 %  | 7    |
| Grain | Płatki jeczienne          | 1 kg (25%)     | 80 %  | 4    |
| Grain | Carafa III                | 0.5 kg (12.5%) | 70 %  | 1034 |

## Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 60 min | 15.5 %     |
| Aroma (end of boil) | Columbus/Tomahawk/Zeus | 15 g   | 10 min | 15.5 %     |
| Aroma (end of boil) | Columbus/Tomahawk/Zeus | 35 g   | 0 min  | 15.5 %     |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.5 g | Fermentis  |

## Extras

| Type  | Name                       | Amount | Use for | Time   |
|-------|----------------------------|--------|---------|--------|
| Spice | Skórka Słodkiej pomarańczy | 40 g   | Boil    | 10 min |

|       |        |        |           |          |
|-------|--------|--------|-----------|----------|
| Other | Ananas | 1000 g | Secondary | 7 day(s) |
|-------|--------|--------|-----------|----------|

## Notes

- Na słodko wyższa temperatura na wytrwano niższa  
*Mar 7, 2018, 9:07 PM*