

# Black AIPA

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **74**
- SRM **29.5**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

## Mash information

- Mash efficiency **92 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**
- Temp **67 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **15 min** at **67C**
- Keep mash **90 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

## Fermentables

| Type  | Name                     | Amount         | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale        | 4.6 kg (83.6%) | 79 %  | 6   |
| Grain | Strzegom Czekoladowy 400 | 0.4 kg (7.3%)  | 68 %  | 400 |
| Grain | Czekoladowy              | 0.3 kg (5.5%)  | 60 %  | 788 |
| Grain | Carafa II                | 0.2 kg (3.6%)  | 70 %  | 812 |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Bravo   | 25 g   | 70 min | 15.5 %     |
| Boil                | Dr Rudi | 25 g   | 30 min | 11.8 %     |
| Boil                | Cascade | 15 g   | 25 min | 6 %        |
| Boil                | Cascade | 15 g   | 15 min | 6 %        |
| Aroma (end of boil) | Cascade | 20 g   | 11 min | 6 %        |

## Yeasts

| Name                              | Type | Form | Amount | Laboratory      |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 11 g   | Mangrove Jack's |