

# BLACK IPA/CDA v10 #130

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **66**
- SRM **33.1**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **17.4 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.6 liter(s)**
- Boil time **80 min**
- Evaporation rate **24.2 %/h**
- Boil size **25 liter(s)**

## Mash information

- Mash efficiency **77.5 %**
- Liquor-to-grist ratio **2.85 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20.3 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **7 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25 liter(s)** of wort

## Fermentables

| Type  | Name                               | Amount          | Yield  | EBC  |
|-------|------------------------------------|-----------------|--------|------|
| Grain | Pale Ale - viking                  | 3.95 kg (74.9%) | 80 %   | 5.5  |
| Grain | Viking - pszeniczny                | 0.3 kg (5.7%)   | 83 %   | 5    |
| Grain | Viking - monachijski II            | 0.392 kg (7.4%) | 79 %   | 22   |
| Grain | Chateau - Cara gold                | 0.2 kg (3.8%)   | 78 %   | 120  |
| Grain | Weyermann - czekoladowy pszeniczny | 0.18 kg (3.4%)  | 72.7 % | 1000 |
| Grain | Weyermann - Carafa II Special      | 0.162 kg (3.1%) | 65 %   | 1150 |
| Grain | Weyermann - Carafa III Special     | 0.088 kg (1.7%) | 65 %   | 1400 |

## Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | Warrior    | 17 g   | 60 min | 14.7 %     |
| Aroma (end of boil) | Columbus   | 30 g   | 10 min | 15.8 %     |
| Aroma (end of boil) | Simcoe     | 25 g   | 5 min  | 12.9 %     |
| Aroma (end of boil) | Centennial | 30 g   | 5 min  | 10.5 %     |

|                     |                 |        |          |        |
|---------------------|-----------------|--------|----------|--------|
| Aroma (end of boil) | Michigan Copper | 7.54 g | 1 min    | 14.5 % |
| Aroma (end of boil) | Moutere         | 23 g   | 1 min    | 15.9 % |
| Dry Hop             | Simcoe          | 55 g   | 2 day(s) | 12.9 % |
| Dry Hop             | Centennial      | 30 g   | 2 day(s) | 10.5 % |
| Dry Hop             | Columbus        | 20 g   | 2 day(s) | 15.8 % |

## Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Liquid | 150 ml | Fermentum Mobile |
| gęstwa 30-dniowa     |      |        |        |                  |

## Extras

| Type        | Name                   | Amount | Use for  | Time   |
|-------------|------------------------|--------|----------|--------|
| Water Agent | Gips                   | 2 g    | Mash     | ---    |
| Water Agent | kwask mlekowy 80% [ml] | 3.11 g | Mash     | ---    |
| Water Agent | chlorek wapnia [ml]    | 0 g    | Mash     | ---    |
| Water Agent | węglan wapnia/kreda    | 6 g    | Mash     | ---    |
| Water Agent | sól epsom              | 1.5 g  | Mash     | ---    |
| Fining      | irish moss             | 3 g    | Boil     | 10 min |
| Water Agent | kwask askorbinowy      | 3.6 g  | Bottling | ---    |