

# BLACK IPA/CDA v11 #138

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **56**
- SRM **34.6**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **18.9 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.2 liter(s)**
- Boil time **80 min**
- Evaporation rate **20.5 %/h**
- Boil size **26 liter(s)**

## Mash information

- Mash efficiency **86 %**
- Liquor-to-grist ratio **2.83 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 **73C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **26 liter(s)** of wort

## Fermentables

| Type  | Name                             | Amount          | Yield  | EBC  |
|-------|----------------------------------|-----------------|--------|------|
| Grain | pilzneński - viking              | 0.35 kg (6.6%)  | 80 %   | 3.6  |
| Grain | pale ale - viking                | 3.6 kg (67.9%)  | 80 %   | 5.5  |
| Grain | pszeniczny - bestmalz            | 0.3 kg (5.7%)   | 83 %   | 5    |
| Grain | monachijski II - viking          | 0.4 kg (7.5%)   | 79 %   | 22   |
| Grain | cara gold - chateau              | 0.066 kg (1.2%) | 78 %   | 120  |
| Grain | karmelowy300 - viking            | 0.134 kg (2.5%) | 73 %   | 300  |
| Grain | czekoladowy pszeniczny - fawcett | 0.2 kg (3.8%)   | 72.7 % | 1000 |
| Grain | carafa III special - weyermann   | 0.25 kg (4.7%)  | 65 %   | 1400 |

## Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | Magnum   | 21 g   | 60 min | 11.5 %     |
| Aroma (end of boil) | Columbus | 30 g   | 10 min | 10.7 %     |
| Aroma (end of boil) | Simcoe   | 25 g   | 5 min  | 12.9 %     |

|                     |          |      |          |        |
|---------------------|----------|------|----------|--------|
| Aroma (end of boil) | Moutere  | 30 g | 5 min    | 15.9 % |
| Aroma (end of boil) | Amarillo | 30 g | 1 min    | 9.9 %  |
| Dry Hop             | Simcoe   | 35 g | 2 day(s) | 12.9 % |
| Dry Hop             | Amarillo | 30 g | 2 day(s) | 9.9 %  |
| Dry Hop             | Moutere  | 30 g | 2 day(s) | 15.9 % |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 175 ml | Fermentum Mobile |
| gęstwa 37-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 | ---    |