

# BLACK IPA/CDA v5 #80

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **68**
- SRM **30.7**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **12 %/h**
- Boil size **26.3 liter(s)**

## Mash information

- Mash efficiency **77.3 %**
- Liquor-to-grist ratio **3.16 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **26.3 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **75 C**, Time **7 min**

## Mash step by step

- Heat up **20 liter(s)** of strike water to **73.3C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **7 min** at **75C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **26.3 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount           | Yield  | EBC  |
|-------|--------------------------------|------------------|--------|------|
| Grain | Viking - pilzneński            | 1.033 kg (16.3%) | 80 %   | 4    |
| Grain | Mep©Ale                        | 4.5 kg (71.1%)   | 82.1 % | 5.5  |
| Grain | Viking - monachijski 2         | 0.114 kg (1.8%)  | 78 %   | 22   |
| Grain | Viking - karmelowy czerwony    | 0.1 kg (1.6%)    | 75 %   | 50   |
| Grain | Chateau - Crystal              | 0.13 kg (2.1%)   | 78 %   | 150  |
| Grain | Weyermann - Carafa II Special  | 0.44 kg (7%)     | 65 %   | 1150 |
| Grain | Weyermann - Carafa III Special | 0.01 kg (0.2%)   | 65 %   | 1400 |

## Hops

| Use for             | Name            | Amount | Time   | Alpha acid |
|---------------------|-----------------|--------|--------|------------|
| Boil                | Warrior         | 20 g   | 60 min | 14.7 %     |
| Aroma (end of boil) | Columbus        | 25 g   | 20 min | 12.4 %     |
| Aroma (end of boil) | Simcoe          | 25 g   | 10 min | 13.2 %     |
| Aroma (end of boil) | Cascade US      | 25 g   | 5 min  | 6.9 %      |
| Aroma (end of boil) | Perle (szyszka) | 25 g   | 5 min  | 7 %        |

|   |                   |      |          |        |
|---|-------------------|------|----------|--------|
| 100 gr mokrej szyszki mrożonej, ekwiwalent 25 gr suchej |                   |      |          |        |
| Aroma (end of boil)                                     | Sybilla (szyszka) | 25 g | 5 min    | 6.5 %  |
| 100 gr mokrej szyszki mrożonej, ekwiwalent 25 gr suchej |                   |      |          |        |
| Dry Hop   | Cascade PL        | 25 g | 3 day(s) | 5.5 %  |
| Dry Hop   | Cascade US        | 30 g | 3 day(s) | 6.9 %  |
| Dry Hop   | Mosaic            | 20 g | 3 day(s) | 12.1 % |
| Dry Hop   | Columbus          | 20 g | 3 day(s) | 12.4 % |

## Yeasts

| Name                        | Type | Form  | Amount | Laboratory       |
|-----------------------------|------|-------|--------|------------------|
| FM54 Gorączka kalifornijska | Ale  | Slant | 140 ml | Fermentum Mobile |

## Extras

| Type        | Name                  | Amount | Use for | Time  |
|-------------|-----------------------|--------|---------|-------|
| Water Agent | Gips                  | 4 g    | Mash    | ---   |
| Water Agent | kwas mlekowy 80% [ml] | 3.03 g | Mash    | ---   |
| Water Agent | chlerek wapnia [ml]   | 0 g    | Mash    | ---   |
| Water Agent | węglan wapnia/kreda   | 7 g    | Mash    | ---   |
| Water Agent | sól epsom             | 1.5 g  | Mash    | ---   |
| Fining      | irish moss            | 3 g    | Boil    | 5 min |