

# BLACK IPA/CDA v3 #51

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **75**
- SRM **32**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.6 liter(s)**

## Mash information

- Mash efficiency **77.3 %**
- Liquor-to-grist ratio **3.15 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.5 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **20.1 liter(s)** of strike water to **73.3C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **10.9 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount          | Yield | EBC  |
|-------|--------------------------------|-----------------|-------|------|
| Grain | Viking - pilzneński            | 5.5 kg (86.1%)  | 80 %  | 4    |
| Grain | Weyermann - Carapils           | 0.15 kg (2.3%)  | 75 %  | 4    |
| Grain | Weyermann - Abbey              | 0.185 kg (2.9%) | 75 %  | 45   |
| Grain | Chateau - Crystal              | 0.15 kg (2.3%)  | 78 %  | 160  |
| Grain | Weyermann - Carafa III Special | 0.4 kg (6.3%)   | 65 %  | 1400 |

## Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Topaz    | 15 g   | 60 min   | 15.5 %     |
| Boil                | Simcoe   | 30 g   | 20 min   | 13.1 %     |
| Boil                | Amarillo | 30 g   | 15 min   | 8.8 %      |
| Aroma (end of boil) | Amarillo | 30 g   | 5 min    | 8.8 %      |
| Aroma (end of boil) | Simcoe   | 30 g   | 5 min    | 13.1 %     |
| Aroma (end of boil) | Cascade  | 30 g   | 5 min    | 7.1 %      |
| Dry Hop             | Amarillo | 30 g   | 3 day(s) | 8.8 %      |
| Dry Hop             | Simcoe   | 65 g   | 3 day(s) | 13.1 %     |

|         |            |      |          |       |
|---------|------------|------|----------|-------|
| Dry Hop | Casacade   | 20 g | 3 day(s) | 7.1 % |
| Dry Hop | Centennial | 35 g | 3 day(s) | 9.4 % |

## Yeasts

| Name                      | Type | Form  | Amount | Laboratory       |
|---------------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen      | Ale  | Slant | 160 ml | Fermentum Mobile |
| 2 pokolenie po warce (49) |      |       |        |                  |

## Extras

| Type        | Name                   | Amount | Use for | Time  |
|-------------|------------------------|--------|---------|-------|
| Water Agent | Gips                   | 2 g    | Mash    | ---   |
| Water Agent | kwask mlekowy 80% [ml] | 1.95 g | Mash    | ---   |
| Water Agent | chlorek wapnia [ml]    | 0 g    | Mash    | ---   |
| Water Agent | węglan wapnia/kreda    | 9 g    | Mash    | ---   |
| Water Agent | sól epsom              | 3 g    | Mash    | ---   |
| Fining      | irish moss             | 3 g    | Boil    | 5 min |