

Black IPA 11

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **76**
- SRM **28**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **14.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.3 liter(s)**
- Total mash volume **12.4 liter(s)**

Steps

- Temp **62 C**, Time **90 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **9.3 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **90 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **14.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 2.5 kg (76.9%) | 80 % | 4 |
| Grain | Weyermann - Dehusked Carafa II | 0.3 kg (9.2%) | 70 % | 837 |
| Grain | Abbey Castle | 0.15 kg (4.6%) | 80 % | 45 |
| Grain | Carahell | 0.15 kg (4.6%) | 77 % | 26 |
| Sugar | Brown Sugar, Dark | 0.15 kg (4.6%) | 100 % | 99 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 15 g | 60 min | 16.8 % |
| Boil | Centennial | 15 g | 45 min | 9.7 % |
| Aroma (end of boil) | Fuggles | 15 g | 15 min | 4.5 % |
| Aroma (end of boil) | Centennial | 15 g | 0 min | 9.7 % |
| Dry Hop | Centennial | 25 g | 4 day(s) | 9.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 250 ml | Fermentis |