

Black IPA

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **82**
- SRM **28.8**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **48.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33.9 liter(s)**
- Total mash volume **45.2 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **33.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **25.7 liter(s)** of **76C** water or to achieve **48.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt | 10 kg (88.5%) | 80 % | 5 |
| Grain | Caramel/Crystal Malt - 10L | 0.3 kg (2.7%) | 75 % | 8 |
| Grain | Carafa III | 1 kg (8.8%) | 70 % | 1034 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 80 g | 60 min | 15.5 % |
| Aroma (end of boil) | Enigma (AUS) | 20 g | 10 min | 17.2 % |
| Aroma (end of boil) | Vic Secret | 20 g | 10 min | 16.3 % |
| Aroma (end of boil) | Enigma (AUS) | 30 g | 5 min | 17.2 % |
| Aroma (end of boil) | Vic Secret | 30 g | 5 min | 16.3 % |
| Aroma (end of boil) | Enigma (AUS) | 50 g | 0 min | 17.2 % |
| Aroma (end of boil) | Vic Secret | 50 g | 0 min | 16.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Vermont Ale | Ale | Slant | 500 ml | Yeast Bay |