

# Hop Kop

- Gravity **13.7 BLG**
- ABV ---
- IBU **57**
- SRM **8.2**
- Style **American Wheat or Rye Beer**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **15 %**
- Size with trub loss **28.8 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **33.8 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Steps

- Temp **55 C**, Time **15 min**
- Temp **62 C**, Time **70 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **19.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **70 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20.8 liter(s)** of **76C** water or to achieve **33.8 liter(s)** of wort

## Fermentables

| Type  | Name                    | Amount         | Yield | EBC |
|-------|-------------------------|----------------|-------|-----|
| Grain | Słód Pale Ale Belgijski | 4.5 kg (69.2%) | 80 %  | 8   |
| Grain | Płatki Ryżowe           | 0.5 kg (7.7%)  | 70 %  | 0   |
| Grain | Bestmalz Red X          | 1 kg (15.4%)   | 79 %  | 30  |
| Grain | Słód Diastatyczny       | 0.5 kg (7.7%)  | 80 %  | 3   |

## Hops

| Use for             | Name                   | Amount | Time      | Alpha acid |
|---------------------|------------------------|--------|-----------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 60 min    | 12.5 %     |
| Aroma (end of boil) | Sorachi Ace            | 20 g   | 30 min    | 12.5 %     |
| Aroma (end of boil) | Waimea                 | 15 g   | 30 min    | 17.4 %     |
| Aroma (end of boil) | Sorachi Ace            | 10 g   | 15 min    | 12.5 %     |
| Aroma (end of boil) | Waimea                 | 10 g   | 15 min    | 17.4 %     |
| Aroma (end of boil) | Waim                   | 5 g    | 5 min     | 17.4 %     |
| Whirlpool           | Sorachi Ace            | 20 g   | 0 min     | 12.5 %     |
| Dry Hop             | Simcoe                 | 10 g   | 10 day(s) | 11.4 %     |

|         |        |      |           |        |
|---------|--------|------|-----------|--------|
| Dry Hop | Waimea | 20 g | 14 day(s) | 17.4 % |
|---------|--------|------|-----------|--------|

## Yeasts

| Name                              | Type | Form | Amount | Laboratory      |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 11.5 g | Mangrove Jack's |

## Extras

| Type        | Name | Amount | Use for | Time    |
|-------------|------|--------|---------|---------|
| Water Agent | Gips | 20 g   | Mash    | 140 min |