

# KLON ATAK CHMIELU

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **63**
- SRM **8.5**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **6 %**
- Size with trub loss **26.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.9 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **27.3 liter(s)**
- Total mash volume **35.1 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **74 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **27.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **74C**
- Keep mash **10 min** at **78C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **31.9 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt   | 6 kg (76.9%)   | 85 %  | 7   |
| Grain | Weyermann - Carared         | 0.8 kg (10.3%) | 75 %  | 45  |
| Grain | Weyermann - Melanoiden Malt | 0.5 kg (6.4%)  | 81 %  | 53  |
| Grain | Weyermann - Carapils        | 0.5 kg (6.4%)  | 78 %  | 4   |

## Hops

| Use for             | Name                   | Amount | Time     | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 35 g   | 60 min   | 15.5 %     |
| Aroma (end of boil) | Citra                  | 10 g   | 10 min   | 12.4 %     |
| Whirlpool           | Citra                  | 15 g   | 20 min   | 12 %       |
| Aroma (end of boil) | Cascade                | 10 g   | 10 min   | 6 %        |
| Whirlpool           | Cascade                | 15 g   | 20 min   | 6 %        |
| Aroma (end of boil) | Simcoe                 | 10 g   | 10 min   | 13.2 %     |
| Whirlpool           | Simcoe                 | 15 g   | 20 min   | 13.2 %     |
| Dry Hop             | Citra                  | 20 g   | 4 day(s) | 12 %       |

|         |         |      |          |        |
|---------|---------|------|----------|--------|
| Dry Hop | Cascade | 20 g | 4 day(s) | 6 %    |
| Dry Hop | Simcoe  | 20 g | 4 day(s) | 13.2 % |

## Yeasts

| Name                          | Type | Form   | Amount | Laboratory |
|-------------------------------|------|--------|--------|------------|
| WLP001 - California Ale Yeast | Ale  | Liquid | 100 ml | White Labs |