

# Single Hop v 3.0 + trawa cytrynowa na Wyeast 2565 Kölsch

- Gravity **16.4 BLG**
- ABV ---
- IBU **61**
- SRM **5.5**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **23.3 liter(s)**

## Steps

- Temp **55 C**, Time **10 min**
- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **25 min** at **64C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

| Type  | Name                                            | Amount         | Yield | EBC  |
|-------|-------------------------------------------------|----------------|-------|------|
| Grain | Słód pilzneński<br>Premium 2-5 EBC<br>Weyermann | 4 kg (68.6%)   | 81 %  | 2.5  |
| Grain | Słód Carabelge<br>30-35 EBC<br>Weyermann        | 0.33 kg (5.7%) | 74 %  | 32.5 |
| Grain | Słód pszeniczny<br>jasny 3-5 EBC<br>Weyermann   | 0.5 kg (8.6%)  | 82 %  | 3.5  |
| Grain | Słód pale ale 5,5-7,5<br>EBC Weyermann          | 1 kg (17.2%)   | 85 %  | 6.5  |

## Hops

| Use for             | Name  | Amount | Time     | Alpha acid |
|---------------------|-------|--------|----------|------------|
| Boil                | Citra | 20 g   | 60 min   | 13.5 %     |
| Boil                | Citra | 20 g   | 30 min   | 13.5 %     |
| Boil                | Citra | 20 g   | 15 min   | 13.5 %     |
| Aroma (end of boil) | Citra | 40 g   | 0 min    | 13.5 %     |
| Dry Hop             | Citra | 50 g   | 5 day(s) | 13.5 %     |

## Yeasts

| Name                                     | Type | Form   | Amount | Laboratory  |
|------------------------------------------|------|--------|--------|-------------|
| Wyeast - Kolsch 2565 z poprzedniej warki | Ale  | Liquid | 125 ml | Wyeast Labs |

## Extras

| Type   | Name            | Amount | Use for | Time   |
|--------|-----------------|--------|---------|--------|
| Fining | Mech irlandzk   | 5 g    | Boil    | 15 min |
| Flavor | trawa cytrynowa | 15 g   | Boil    | 15 min |