

# kwaz

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **18**
- SRM **3.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.1 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **13.3 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **11.2 liter(s)** of **76C** water or to achieve **20.7 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt  | 3.2 kg (84.2%) | 82 %  | 4   |
| Grain | Weyermann - Carapils | 0.3 kg (7.9%)  | 78 %  | 4   |
| Grain | Oats, Flaked         | 0.3 kg (7.9%)  | 80 %  | 2   |

## Hops

| Use for   | Name        | Amount | Time     | Alpha acid |
|-----------|-------------|--------|----------|------------|
| Boil      | lunga       | 5 g    | 60 min   | 11 %       |
| Whirlpool | Oktawia     | 50 g   | 5 min    | 7.4 %      |
| Whirlpool | amora preta | 50 g   | 5 min    | 7.3 %      |
| Dry Hop   | EXP 2/20    | 100 g  | 5 day(s) | 11.2 %     |
| Dry Hop   | amora preta | 50 g   | 5 day(s) | 7.3 %      |

## Yeasts

| Name          | Type | Form  | Amount | Laboratory |
|---------------|------|-------|--------|------------|
| lactobacillus | Ale  | Dry   | 5 g    | ---        |
| US-05         | Ale  | Slant | 150 ml | ---        |