

# Wrocław

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **35**
- SRM **3.8**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

## Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **8.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **76C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

| Type  | Name                     | Amount         | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt     | 1.1 kg (37.9%) | 80 %  | 5   |
| Grain | Weyermann - Pilsner Malt | 0.8 kg (27.6%) | 81 %  | 5   |
| Grain | Weyermann - Vienna Malt  | 1 kg (34.5%)   | 81 %  | 8   |

## Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Magnum   | 15 g   | 60 min   | 12.4 %     |
| Boil                | EXP 2/20 | 10 g   | 10 min   | 7.5 %      |
| Aroma (end of boil) | Izabella | 20 g   | 1 min    | 7.6 %      |
| Aroma (end of boil) | EXP 2/20 | 20 g   | 1 min    | 7.5 %      |
| Dry Hop             | EXP 2/20 | 15 g   | 1 day(s) | 7.5 %      |
| Dry Hop             | Sybilla  | 10 g   | 1 day(s) | 6.2 %      |