

# NE PA

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **22**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **10 %**
- Size with trub loss **18 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **19.1 liter(s)**

## Steps

- Temp **70 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14.9 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **60 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **10.8 liter(s)** of **76C** water or to achieve **21.4 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Pilzneński           | 2 kg (47.1%)   | 81 %  | 4   |
| Grain | Viking Pale Ale malt | 2 kg (47.1%)   | 80 %  | 5   |
| Grain | Abbey Malt Weyermann | 0.25 kg (5.9%) | 75 %  | 45  |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Cascade | 20 g   | 20 min | 6 %        |
| Aroma (end of boil) | Cascade | 20 g   | 0 min  | 6 %        |
| Whirlpool           | Cascade | 60 g   | 15 min | 6 %        |

## Yeasts

| Name              | Type | Form   | Amount  | Laboratory |
|-------------------|------|--------|---------|------------|
| wlp066 London Fog | Ale  | Liquid | 1000 ml | White Labs |

## Extras

| Type                               | Name           | Amount | Use for | Time |
|------------------------------------|----------------|--------|---------|------|
| Water Agent                        | Kwas fosforowt | 2 g    | Mash    | ---  |
| Do zakwaszenia wody do wysładzania |                |        |         |      |

|             |                 |     |      |     |
|-------------|-----------------|-----|------|-----|
| Water Agent | kwask fosforowy | 1 g | Mash | --- |
|-------------|-----------------|-----|------|-----|