

# PNEIPA EXPF-3/20 SH

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **24**
- SRM **4.5**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **66 C**, Time **15 min**
- Temp **73 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **15 min** at **66C**
- Keep mash **45 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount       | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Pilzneński           | 3.8 kg (95%) | 81 %  | 4   |
| Grain | Weyermann - Carapils | 0.2 kg (5%)  | 78 %  | 4   |

## Hops

| Use for             | Name      | Amount | Time     | Alpha acid |
|---------------------|-----------|--------|----------|------------|
| Aroma (end of boil) | EXPF-3/20 | 60 g   | 10 min   | 7 %        |
| Whirlpool           | EXPF-3/20 | 40 g   | 0 min    | 7 %        |
| Dry Hop             | EXPF-3/20 | 100 g  | 3 day(s) | 7 %        |

## Yeasts

| Name   | Type | Form  | Amount | Laboratory |
|--------|------|-------|--------|------------|
| wlp067 | Ale  | Slant | 100 ml | white labs |

## Extras

| Type        | Name | Amount | Use for | Time   |
|-------------|------|--------|---------|--------|
| Water Agent | gips | 4 g    | Mash    | 60 min |