

## PIPA II

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **45**
- SRM **3.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.8 liter(s)**
- Total mash volume **17 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.2 kg (51.6%) | 80 %  | 5   |
| Grain | Pilzński             | 1.8 kg (42.3%) | 81 %  | 4   |
| Grain | Strzegom Bursztynowy | 0.1 kg (2.3%)  | 70 %  | 70  |
| Grain | Pszeniczny           | 0.16 kg (3.8%) | 85 %  | 4   |

### Hops

| Use for | Name     | Amount | Time     | Alpha acid |
|---------|----------|--------|----------|------------|
| Boil    | Puławski | 25 g   | 55 min   | 8.9 %      |
| Boil    | Oktawia  | 25 g   | 30 min   | 7.1 %      |
| Boil    | zula     | 25 g   | 10 min   | 8 %        |
| Dry Hop | zula     | 25 g   | 4 day(s) | 8 %        |
| Dry Hop | Puławski | 25 g   | 4 day(s) | 8.9 %      |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |