

## HEIPA #2

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **22**
- SRM **7.2**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **0 %**
- Size with trub loss **15.4 liter(s)**
- Boil time **45 min**
- Evaporation rate **12 %/h**
- Boil size **19.3 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.9 liter(s)**
- Total mash volume **15.8 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **11.9 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **75C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **19.3 liter(s)** of wort

### Fermentables

| Type  | Name              | Amount         | Yield   | EBC |
|-------|-------------------|----------------|---------|-----|
| Grain | Pale Ale          | 3.2 kg (81%)   | 74.84 % | 13  |
| Grain | Viking Wheat Malt | 0.5 kg (12.7%) | 84 %    | 15  |
| Grain | Oats, Flaked      | 0.25 kg (6.3%) | 80 %    | 4   |

### Hops

| Use for | Name     | Amount | Time     | Alpha acid |
|---------|----------|--------|----------|------------|
| Boil    | Amarillo | 10 g   | 15 min   | 9.2 %      |
| Boil    | Citra    | 10 g   | 15 min   | 12 %       |
| Boil    | Galaxy   | 10 g   | 5 min    | 14 %       |
| Boil    | Citra    | 10 g   | 5 min    | 12 %       |
| Boil    | Amarillo | 10 g   | 0 min    | 9.2 %      |
| Boil    | Citra    | 10 g   | 0 min    | 12 %       |
| Dry Hop | Amarillo | 25 g   | 0 day(s) | 9.2 %      |
| Dry Hop | Citra    | 25 g   | 0 day(s) | 12 %       |
| Dry Hop | Galaxy   | 25 g   | 0 day(s) | 14 %       |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|                      |     |        |        |                  |
|----------------------|-----|--------|--------|------------------|
| FM55 Zielone wzgórze | Ale | Liquid | 250 ml | Fermentum mobile |
|----------------------|-----|--------|--------|------------------|

### Extras

| Type        | Name                     | Amount | Use for | Time   |
|-------------|--------------------------|--------|---------|--------|
| Water Agent | Phosphoric Acid 85%      | 3 g    | Mash    | 60 min |
| Water Agent | Siarczan Magnezu (MgSO4) | 2 g    | Mash    | 60 min |
| Water Agent | Chlorek Wapnia           | 1.47 g | Mash    | 60 min |
| Water Agent | Gips (Calcium Sulfate)   | 0.85 g | Mash    | 60 min |
| Water Agent | Sól                      | 0.75 g | Mash    | 60 min |
| Water Agent | Siarczan Magnezu (MgSO4) | 2 g    | Mash    | 60 min |
| Water Agent | Chlorek Wapnia           | 1.55 g | Mash    | 60 min |
| Water Agent | Gips (Calcium Sulfate)   | 0.89 g | Mash    | 60 min |
| Water Agent | Sól                      | 0.79 g | Mash    | 60 min |