

ŻURAW - MANDARINE INDIA PALE ALE

- Gravity **14 BLG**
- ABV ---
- IBU **89**
- SRM **5.7**
- Style **English IPA**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **73 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **30 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **22.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale | 3 kg (66.7%) | 79 % | 6 |
| Grain | Żytni | 0.5 kg (11.1%) | 85 % | 8 |
| Grain | Pszeniczny | 1 kg (22.2%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|-----------|------------|
| Boil | Apollo | 30 g | 60 min | 17 % |
| Boil | Mandarina Bavaria | 50 g | 10 min | 10 % |
| Dry Hop | Mandarina Bavaria | 50 g | 10 day(s) | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------|------------------|--------|-----------|----------|
| Spice | Zest z madarynek | 150 g | Secondary | 7 day(s) |