

TUR - IMPERIAL RYE ULTRA IPA

- Gravity **22.2 BLG**
- ABV **10 %**
- IBU **274**
- SRM **9.1**
- Style **Imperial 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 **2.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **73 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **70.4C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **6.8 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale | 4 kg (71.4%) | 79 % | 6 |
| Grain | Karmelowy jasny 30EBC | 0.8 kg (14.3%) | 75 % | 30 |
| Grain | Weyermann pszeniczny jasny | 0.8 kg (14.3%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|-----------|------------|
| Boil | Apollo | 80 g | 60 min | 17 % |
| Boil | Waimea | 40 g | 60 min | 17 % |
| Boil | Cascade | 20 g | 10 min | 6 % |
| Boil | Centennial | 20 g | 10 min | 10.5 % |
| Boil | Lemon drop | 20 g | 10 min | 4.6 % |
| Dry Hop | Cascade | 60 g | 30 day(s) | 6 % |
| Dry Hop | Centennial | 20 g | 30 day(s) | 10.5 % |
| Dry Hop | Lemon drop | 60 g | 30 day(s) | 4.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--|-------------|-------------|---------------|-------------------|
| Mangrove Jack's M42 New World Strong Ale | Ale | Dry | 8 g | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|---------------------|---------------|----------------|-------------|
| Spice | Zest z pomarańczy | 80 g | Secondary | 30 day(s) |
| Spice | Zest z grapefruitów | 80 g | Secondary | 30 day(s) |
| Spice | Zest z cytryn | 80 g | Secondary | 30 day(s) |
| Spice | Zest z limonek | 80 g | Secondary | 30 day(s) |