

Żytko

- Gravity **14.3 BLG**
- ABV ---
- IBU **64**
- SRM **11.8**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Pale Ale | 3.6 kg (69.2%) | 80 % | 4 |
| Grain | Żytmi | 1.2 kg (23.1%) | 85 % | 8 |
| Grain | Strzegom Karmel 150 | 0.4 kg (7.7%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil | Warrior | 15 g | 30 min | 15.5 % |
| Boil | Mosaic | 60 g | 10 min | 10 % |
| Boil | Sorachi Ace | 30 g | 10 min | 10 % |
| Boil | Cascade | 65 g | 2 min | 6 % |
| Boil | Zythos | 30 g | 2 min | 11 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Dry | 11 g | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|--------|
| Water Agent | gips piwowarski | 5 g | Mash | 90 min |
| Fining | mech irlandzki | 10 g | Boil | 15 min |