

Żytnie

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **53**
- SRM **6.8**
- Style **Rye IPA**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

Steps

- Temp **50 C**, Time **15 min**
- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **80 C**, Time **15 min**

Mash step by step

- Heat up **12.9 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **80C**
- Sparge using **6.6 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.6 kg (60.5%) | 80 % | 5 |
| Grain | Rye Malt | 1 kg (23.3%) | 63 % | 10 |
| Grain | Strzegom Karmel 30 | 0.2 kg (4.7%) | 75 % | 30 |
| Grain | Strzegom Wiedeński | 0.5 kg (11.6%) | 79 % | 10 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|--------|--------|----------|------------|
| Boil | Simcoe | 15 g | 60 min | 13.2 % |
| Whirlpool | Mosaic | 30 g | 30 min | 10 % |
| Dry Hop | Citra | 50 g | 3 day(s) | 12 % |
| Dry Hop | Mosaic | 50 g | 3 day(s) | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 100 ml | Fermentis |