

Trois Apa

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **29**
- SRM **3.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

Steps

- Temp **69 C**, Time **60 min**

Mash step by step

- Heat up **13.8 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **69C**
- Sparge using **19.8 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------|--------------|-------|-----|
| Grain | Strzegom Pale Ale | 3 kg (65.2%) | 79 % | 6 |
| Grain | Żytni | 1 kg (21.7%) | 85 % | 8 |
| Grain | Płatki owsiane | 0.6 kg (13%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------|--------|----------|------------|
| Boil | lunga | 10 g | 60 min | 11 % |
| Boil | Mosaic | 15 g | 15 min | 10 % |
| Boil | Citra | 15 g | 15 min | 12 % |
| Boil | Mosaic | 15 g | 0 min | 10 % |
| Boil | Citra | 15 g | 0 min | 12 % |
| Dry Hop | Citra | 20 g | 3 day(s) | 12 % |
| Dry Hop | Mosaic | 20 g | 3 day(s) | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------|------|-------|--------|------------|
| wlp644 | Ale | Slant | 200 ml | white labs |