

Little ZŁY

- Gravity **7.3 BLG**
- ABV ---
- IBU **31**
- SRM **6.7**
- Style **Rye IPA**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

Steps

- Temp **68 C**, Time **35 min**
- Temp **72 C**, Time **45 min**

Mash step by step

- Heat up **8.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **35 min** at **68C**
- Keep mash **45 min** at **72C**
- Sparge using **24.6 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Pilznieński | 1.7 kg (58.6%) | 81 % | 4 |
| Grain | Żytni | 1 kg (34.5%) | 85 % | 8 |
| Grain | Karmelowy żytni Strzegom | 0.2 kg (6.9%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|----------|------------|
| Mash | Citra | 15 g | 60 min | 13.5 % |
| Boil | Citra | 20 g | 15 min | 13.5 % |
| Boil | Cascade | 20 g | 10 min | 7.7 % |
| Boil | Citra | 25 g | 5 min | 13.5 % |
| Dry Hop | Citra | 45 g | 5 day(s) | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|-------------|----------------|-----|------|--------|
| Water Agent | Chlorek Wapnia | 5 g | Boil | 60 min |
|-------------|----------------|-----|------|--------|