

test,test

- Gravity **18.2 BLG**
- ABV ---
- IBU **98**
- SRM **9.4**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **30.8 liter(s)**

Steps

- Temp **64 C**, Time **60 min**

Mash step by step

- Heat up **23.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|--------------|-------|-----|
| Grain | Strzegom Pale Ale | 5.7 kg (74%) | 79 % | 6 |
| Grain | Strzegom Karmel 30 | 1 kg (13%) | 75 % | 30 |
| Grain | Pszeniczny | 1 kg (13%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 50 g | 60 min | 12.5 % |
| Aroma (end of boil) | Cascade | 30 g | 0 min | 7.7 % |
| Boil | Centennial | 40 g | 45 min | 8.5 % |
| Dry Hop | Citra | 30 g | 7 day(s) | 13.5 % |
| Boil | Citra | 20 g | 30 min | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------|------|--------|--------|-------------|
| Wyeast - American Ale II | Ale | Liquid | 500 ml | Wyeast Labs |