

Ozzie

- Gravity **11.4 BLG**
- ABV ---
- IBU **49**
- SRM **4.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **12 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **17.4 liter(s)**

Steps

- Temp **50 C**, Time **5 min**
- Temp **65 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **5 min** at **50C**
- Keep mash **70 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **20.2 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale | 4 kg (92%) | 79 % | 6 |
| Grain | Strzegom Monachijski typ II | 0.25 kg (5.7%) | 79 % | 22 |
| Grain | Strzegom Karmel 30 | 0.1 kg (2.3%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|----------|------------|
| Boil | Ella (AUS) | 7 g | 60 min | 14.6 % |
| Boil | Ella (AUS) | 30 g | 10 min | 14.6 % |
| Boil | Galaxy | 30 g | 10 min | 15 % |
| Dry Hop | Cascade | 40 g | 7 day(s) | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| M36 | Ale | Dry | 12 g | Mangrove |