

## ales

- Gravity **12.3 BLG**
- ABV ---
- IBU **56**
- SRM **5.4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

| Type  | Name              | Amount      | Yield | EBC |
|-------|-------------------|-------------|-------|-----|
| Grain | Strzegom Pale Ale | 5 kg (100%) | 79 %  | 6   |

### Hops

| Use for   | Name    | Amount | Time    | Alpha acid |
|-----------|---------|--------|---------|------------|
| Boil      | chinook | 30 g   | 60 min  | 11.2 %     |
| Boil      | chinook | 20 g   | 30 min  | 11.2 %     |
| Whirlpool | enigma  | 150 g  | 120 min | 16.5 %     |

### Yeasts

| Name                              | Type | Form | Amount | Laboratory |
|-----------------------------------|------|------|--------|------------|
| Mangrove Jack's M44 US West Coast | Ale  | Dry  | 11 g   | ---        |

### Extras

| Type        | Name            | Amount | Use for | Time   |
|-------------|-----------------|--------|---------|--------|
| Fining      | mech irlandzki  | 10 g   | Boil    | 15 min |
| Water Agent | gips piwowarski | 5 g    | Mash    | 60 min |