

Pale sAle

- Gravity **14.7 BLG**
- ABV ---
- IBU **54**
- SRM **12.8**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **19.5 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **18.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|---------------|-------|-----|
| Grain | Strzegom Pale Ale | 4 kg (61.5%) | 79 % | 6 |
| Grain | Strzegom Wiedeński | 2 kg (30.8%) | 79 % | 10 |
| Grain | Strzegom Karmel 150 | 0.5 kg (7.7%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil | Marynka | 50 g | 60 min | 10 % |
| Boil | Mosaic | 20 g | 10 min | 10 % |
| Boil | Cascade | 20 g | 5 min | 6 % |
| Boil | Mosaic | 30 g | 1 min | 10 % |
| Dry Hop | Cascade | 30 g | 5 day(s) | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------------|------|-------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Slant | 150 ml | Mangrove Jack's |