

Pale Ale

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **47**
- SRM **4.9**
- Style **English IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **24.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|--------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 3.2 kg (80%) | 88 % | 7 |
| Grain | Monachijski | 0.6 kg (15%) | 87 % | 16 |
| Grain | viking Caramel Pale | 0.2 kg (5%) | 85 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Phoenix | 30 g | 50 min | 11 % |
| Aroma (end of boil) | Progress | 40 g | 10 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M36 Liberty Bell Ale | Ale | Dry | 10 g | Mangrove Jack's |