

Empress of India (Pale Ale)

- Gravity **20.2 BLG**
- ABV ---
- IBU **110**
- SRM **6.4**
- Style **Imperial IPA**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **15 %**
- Size with trub loss **21.9 liter(s)**
- Boil time **75 min**
- Evaporation rate **15 %/h**
- Boil size **26 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **18.1 liter(s)**
- Total mash volume **25.4 liter(s)**

Steps

- Temp **55 C**, Time **20 min**
- Temp **62 C**, Time **70 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **18.1 liter(s)** of strike water to **62C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **70 min** at **62C**
- Keep mash **20 min** at **72C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **26 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Weyermann - Pilsner Malt | 6 kg (82.8%) | 81 % | 5 |
| Grain | Weyermann - Pale Wheat Malt | 1 kg (13.8%) | 85 % | 5 |
| Grain | Briess - Carapils Malt | 0.25 kg (3.4%) | 74 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------|--------|--------|------------|
| Boil | Vic Secret (AUS) | 50 g | 27 min | 16.1 % |
| Aroma (end of boil) | Vic Secret (AUS) | 50 g | 10 min | 16.1 % |
| Aroma (end of boil) | Vic Secret (AUS) | 50 g | 7 min | 16.1 % |
| Aroma (end of boil) | Vic Secret (AUS) | 50 g | 4 min | 16.1 % |
| Aroma (end of boil) | Vic Secret (AUS) | 50 g | 2 min | 16.1 % |
| Aroma (end of boil) | Vic Secret (AUS) | 50 g | 0 min | 16.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|--------------------------------------|-----|-------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Slant | 180 ml | Mangrove Jack's |
|--------------------------------------|-----|-------|--------|-----------------|

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Fining | Mech irlandzki | 10 g | Boil | 10 min |