

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

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