

Tropical FES

- Gravity **17.3 BLG**
- ABV ---
- IBU **63**
- SRM **60.5**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **0 %**
- Size with trub loss **16 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.4 liter(s)**
- Total mash volume **17.8 liter(s)**

Steps

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

Mash step by step

- Heat up **13.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **10.5 liter(s)** of **76C** water or to achieve **19.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|-------------------|-----------------|---------|------|
| Grain | Pilsner | 3.62 kg (75.9%) | 82.61 % | 3 |
| Adjunct | Flaked Barley | 0.32 kg (6.7%) | 69.57 % | 4 |
| Grain | CaraAroma | 0.38 kg (8%) | 73.91 % | 345 |
| Grain | Roasted Barley | 0.26 kg (5.5%) | 63.04 % | 1466 |
| Grain | De-Husked Caraf I | 0.19 kg (4%) | 69.57 % | 906 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 50 g | 60 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------------|------|------|--------|--------------------|
| Safale - English Ale Yeast S-04 | Ale | Dry | 11.5 g | Fermentis / Safale |