

tropical stout

- Gravity **17.7 BLG**
- ABV ---
- IBU **40**
- SRM **45.3**
- Style **Foreign Extra Stout**

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 **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.7 liter(s)**
- Total mash volume **30.4 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **23.7 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **8.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|------|
| Grain | Briess - Pale Ale Malt | 5 kg (74%) | 80 % | 7 |
| Grain | Płatki owsiane | 0.5 kg (7.4%) | 85 % | 3 |
| Grain | Jęczmień palony | 0.5 kg (7.4%) | 55 % | 985 |
| Grain | Chocolate Malt (UK) | 0.38 kg (5.6%) | 73 % | 1100 |
| Grain | Abbey Castle | 0.38 kg (5.6%) | 80 % | 45 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------|--------|-----------|------------|
| Boil | Galaxy | 30 g | 60 min | 13.3 % |
| Dry Hop | relax | 30 g | 14 day(s) | 1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-04 | Ale | Dry | 22 g | safale |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|----------------------------|------|------|--------|
| Spice | skórka słodkiej pomarańczy | 25 g | Boil | 15 min |
| Fining | mech irlandzki | 10 g | Boil | 15 min |
| Spice | Cayenne Pepper | 5 g | Boil | 15 min |