

troche guinness

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **26**
- SRM **27.7**
- Style **Dry 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 **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------|---------------|-------|-----|
| Grain | Pilzneński | 4 kg (72.7%) | 81 % | 4 |
| Grain | Płatki owsiane | 0.5 kg (9.1%) | 85 % | 3 |
| Grain | Płatki pszeniczne | 0.5 kg (9.1%) | 85 % | 3 |
| Grain | Jęczmień palony | 0.5 kg (9.1%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Hallertau | 30 g | 50 min | 4.6 % |
| Boil | Hallertau | 30 g | 30 min | 4.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M42 New World Strong Ale | Ale | Dry | 11 g | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------|--------|---------|--------|
| Fining | whirflock | 2 g | Boil | 15 min |