

Forest stout

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **54**
- SRM **40.7**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **6.3 liter(s)** of **76C** water or to achieve **14.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3.5 kg (87.5%) | 80 % | 5 |
| Grain | Jęczmień palony | 0.5 kg (12.5%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 30 g | 60 min | 11 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------|------|-------|--------|-----------------|
| Mangrove Jack's M12 Voss Kveik | Ale | Slant | 100 ml | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|-----------------------|--------------|--------|-----------|----------|
| Flavor | pepy świerku | 250 g | Boil | 5 min |
| Flavor | pepy świerku | 250 g | Secondary | 3 day(s) |
| na CC 1°C przez 3 dni | | | | |