

Scottish Export

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **22**
- SRM **15.7**
- Style **Scottish Export 80/-**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **120 min**
- Evaporation rate **8 %/h**
- Boil size **33.4 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **31.3 liter(s)**

Steps

- Temp **66 C**, Time **20 min**
- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **24 liter(s)** of strike water to **73C**
- Add grains
- Keep mash **20 min** at **66C**
- Keep mash **30 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **33.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------|---------------|-------|-----|
| Grain | Pale Ale | 7 kg (96.3%) | 83 % | 6 |
| Grain | Carafa II | 0.2 kg (2.8%) | 70 % | 812 |
| Grain | Jęczmień palony | 0.07 kg (1%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Chinook | 30 g | 60 min | 8 % |
| Boil | Saaz | 20 g | 10 min | 3.9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------------|------|------|--------|------------------|
| Mangrove Jack's - Empire Ale M15 | Ale | Dry | 10 g | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|--------|---------------|--------|-----------|-----------|
| Flavor | Płatki dębowe | 30 g | Secondary | 14 day(s) |