

SCOTTISH ALE

- Gravity **11.4 BLG**
- ABV ---
- IBU **16**
- SRM **17.6**

Batch size

- Expected quantity of finished beer **160 liter(s)**
- Trub loss **3 %**
- Size with trub loss **164.8 liter(s)**
- Boil time **120 min**
- Evaporation rate **5 %/h**
- Boil size **198.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **136.8 liter(s)**
- Total mash volume **167.2 liter(s)**

Steps

- Temp **68 C**, Time **75 min**

Mash step by step

- Heat up **136.8 liter(s)** of strike water to **73.3C**
- Add grains
- Keep mash **75 min** at **68C**
- Sparge using **92.5 liter(s)** of **76C** water or to achieve **198.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------|-----------------|-------|------|
| Grain | Golden Promise | 24.8 kg (81.6%) | 81 % | 6 |
| Grain | Crystal Malt | 4.8 kg (15.8%) | 75 % | 160 |
| Grain | Chocolate Malt | 0.8 kg (2.6%) | 60 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 200 g | 60 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|---------|--------|------------|
| Safale S-04 | Ale | Culture | 100 g | Safale |