

Licence to chill

- Gravity **22 BLG**
- ABV **9.9 %**
- IBU **28**
- SRM **17.7**
- Style **Strong Scotch Ale**

Batch size

- Expected quantity of finished beer **9.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **13.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.4 liter(s) / kg**
- Mash size **10 liter(s)**
- Total mash volume **14.1 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **10 liter(s)** of strike water to **76.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **77C**
- Sparge using **7.3 liter(s)** of **76C** water or to achieve **13.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|----------------|-------|-----|
| Grain | Castle Pale Ale | 3 kg (72.3%) | 80 % | 8 |
| Grain | Castle Malting Whisky Nature | 1 kg (24.1%) | 85 % | 4 |
| Grain | Carafa | 0.15 kg (3.6%) | 70 % | 664 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| First Wort | East Kent Goldings | 30 g | 80 min | 5.1 % |
| Aroma (end of boil) | East Kent Goldings | 20 g | 1 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|------|--------|------------|
| Danstar - Windsor Ale | Ale | Dry | 11 g | Danstar |