

Programmer's ELbow

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **36**
- SRM **6.8**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **20.6 liter(s)**

Steps

- Temp **67 C**, Time **75 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **75 min** at **67C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Simpsons - Maris Otter | 5.5 kg (93.2%) | 81 % | 6 |
| Grain | Caramel/Crystal Malt - 10L | 0.3 kg (5.1%) | 75 % | 20 |
| Grain | Caramel/Crystal Malt - 120L | 0.1 kg (1.7%) | 72 % | 236 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 70 g | 60 min | 5.1 % |
| Boil | East Kent Goldings | 30 g | 1 min | 5.1 % |