

ESB v3

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **45**
- SRM **12.2**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **13.4 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **73.4C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **5.1 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Simpsons - Maris Otter | 2.4 kg (84.2%) | 81 % | 6 |
| Grain | Caramel/Crystal Malt - 120L | 0.25 kg (8.8%) | 72 % | 236 |
| Grain | Wheat, Torrified | 0.2 kg (7%) | 79 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | Target | 20 g | 60 min | 9 % |
| Boil | East Kent Goldings | 10 g | 20 min | 6.2 % |
| Boil | East Kent Goldings | 30 g | 0 min | 6.2 % |

Yeasts

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

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------|--------|---------|--------|
| Water Agent | CaSO4 | 3.33 g | Mash | 60 min |

| | | | | |
|-------------|-------------|--------|------|--------|
| Water Agent | Lactic Acid | 3.81 g | Mash | 60 min |
| Water Agent | Whirlfloc-T | 1.19 g | Boil | 10 min |