

## ESB v3

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- 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