

## ESB

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **34**
- SRM **10.6**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **8 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **26 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4.2 kg (79.2%) | 80 %  | 5   |
| Grain | viking malt cookie   | 0.5 kg (9.4%)  | 80 %  | 5   |
| Grain | Pszeniczny           | 0.5 kg (9.4%)  | 85 %  | 4   |
| Grain | Jęczmień palony      | 0.1 kg (1.9%)  | 55 %  | 985 |

### Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | East Kent Goldings | 30 g   | 60 min | 5.1 %      |
| Boil    | Fuggles            | 35 g   | 30 min | 4.5 %      |
| Boil    | Fuggles            | 35 g   | 10 min | 4.5 %      |

### Yeasts

| Name                 | Type | Form  | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Danstar - Nottingham | Ale  | Slant | 60 ml  | Danstar    |