

## ESB ciemny

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **42**
- SRM **17**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **55.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37.2 liter(s)**
- Total mash volume **49.6 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **37.2 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **76C**
- Sparge using **31 liter(s)** of **76C** water or to achieve **55.8 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount        | Yield | EBC  |
|-------|-----------------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt        | 10 kg (80.6%) | 80 %  | 5    |
| Grain | Briess - Carapils Malt      | 2 kg (16.1%)  | 74 %  | 3    |
| Grain | Strzegom Czekoladowy ciemny | 0.4 kg (3.2%) | 68 %  | 1200 |

### Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Cascade PL | 50 g   | 60 min | 5.5 %      |
| Boil    | Magnum     | 50 g   | 60 min | 12 %       |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 40 g   | Safale     |