

## 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