

ESB

- Gravity **14.3 BLG**
- ABV ---
- IBU **40**
- SRM **13.7**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **41 liter(s)**
- Trub loss **10 %**
- Size with trub loss **45.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **49.6 liter(s)**

Mash information

- Mash efficiency **95 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

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

Mash step by step

- Heat up **22.5 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **36.1 liter(s)** of **76C** water or to achieve **49.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale Malt	8 kg (88.9%)	80 %	7
Grain	Fawcett - Crystal	0.5 kg (5.6%)	70 %	160
Grain	Fawcett - Crystal Rye	0.5 kg (5.6%)	73 %	177

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Fuggles	50 g	15 min	4.5 %
Boil	Columbus/Tomahawk/Zeus	40 g	60 min	14.5 %
Aroma (end of boil)	Fuggles	25 g	10 min	4.5 %
Aroma (end of boil)	Fuggles	25 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale