

ESB

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **40**
- SRM **15.2**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **20.2 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (69.3%)	80 %	5
Grain	Strzegom Monachijski typ II	0.4 kg (7.9%)	79 %	22
Grain	Viking Pilsner malt	0.5 kg (9.9%)	82 %	4
Grain	Caraaroma	0.4 kg (7.9%)	78 %	400
Grain	Caramunich® typ I	0.25 kg (5%)	73 %	80

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	East Kent Goldings	30 g	45 min	5.1 %
Boil	East Kent Goldings	20 g	30 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis