

ESB

- Gravity **12.6 BLG**
- ABV ---
- IBU **34**
- SRM **5.9**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **8 %/h**
- Boil size **25.1 liter(s)**

Mash information

- Mash efficiency **82.5 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.4 liter(s)**
- Total mash volume **17.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **13.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **77C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **25.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4.2 kg (94.4%)	79 %	6
Grain	Strzegom Karmel 30	0.25 kg (5.6%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	15 g	60 min	15.5 %
Boil	Kent Goldings	20 g	15 min	5.5 %
Boil	Kent Goldings	10 g	5 min	5.5 %
Whirlpool	Kent Goldings	20 g	30 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	150 ml	Danstar

Extras

Type	Name	Amount	Use for	Time
Fining	Mech	5 g	Boil	15 min
Water Agent	Gips	4 g	Mash	60 min

Water Agent	Chlorek wapnia	4 g	Mash	60 min
Water Agent	Kwas mlekowy	6 g	Mash	55 min