

valhalla

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **42**
- SRM **12.9**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **13.6 liter(s)**

Steps

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

Mash step by step

- Heat up **10.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **77C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	2.5 kg (73.5%)	81 %	6
Grain	Brown Malt (British Chocolate)	0.5 kg (14.7%)	70 %	180
Grain	Płatki owsiane	0.4 kg (11.8%)	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Styrian Golding	45 g	60 min	3.6 %
Boil	East Kent Goldings	10 g	30 min	5.1 %
Boil	East Kent Goldings	10 g	15 min	5.1 %
Whirlpool	East Kent Goldings	15 g	30 min	5.1 %

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
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Fining	tabletka	2.5 g	Boil	10 min
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