

SPECIAL BITTER

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **31**
- SRM **10**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.2 liter(s)**
- Total mash volume **18.9 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **14.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **1 min** at **76C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Soufflet Pale Ale	4 kg (84.6%)	80 %	6
Grain	Słód Caramunich Typ II Weyermann	0.5 kg (10.6%)	73 %	120
Grain	Biscuit Malt	0.1 kg (2.1%)	79 %	45
Grain	Chocolate Malt	0.03 kg (0.6%)	73 %	887
Grain	Strzegom Monachijski typ II	0.1 kg (2.1%)	79 %	22

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	marynka	20 g	60 min	7.2 %
Boil	East Kent Goldings	10 g	60 min	5.4 %
Boil	East Kent Goldings	20 g	20 min	5.4 %
Boil	Fuggles	20 g	5 min	5.2 %
Boil	East Kent Goldings	20 g	0 min	5.4 %
Boil	Fuggles	15 g	0 min	5.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Safale S-04	Ale	Dry	10 g	Safale
/Mangrove Jack's -M15 Empire Ale				