

# SPECJAL Bitter

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **16**
- SRM **6.3**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **3 %**
- Size with trub loss **27 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **31.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **26.4 liter(s)**
- Total mash volume **33 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **26.4 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.3 kg (65.2%)	80 %	5
Grain	Simpsons - Amber Malt	0.3 kg (4.5%)	75 %	54
Grain	Simpsons - Crystal Light	0.2 kg (3%)	70 %	110
Grain	Strzegom Pilzneński	1 kg (15.2%)	80 %	4
Grain	Płatki jęczmienne	0.3 kg (4.5%)	60 %	3
Grain	Weyermann - Carapils	0.5 kg (7.6%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	20 g	60 min	5 %
Aroma (end of boil)	Willamette	50 g	10 min	5 %
Aroma (end of boil)	Willamette	50 g	0 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Lallemand - Lalbrew London English-style	Ale	Culture	1200 g	Lallemand
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### Extras

Type	Name	Amount	Use for	Time
Water Agent	CaSO <sub>4</sub> Siarczan wapnia	5 g	Mash	60 min
Water Agent	CaCl <sub>2</sub>	3 g	Mash	60 min