

# Special Bitter

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **35**
- SRM **7.5**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **11 %**
- Size with trub loss **14.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **18.9 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **20.1 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **71.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **72C**
- Sparge using **5.5 liter(s)** of **76C** water or to achieve **18.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep@Ale	2.9 kg (86.6%)	80 %	6
Grain	Mep@Wheat	0.15 kg (4.5%)	84.7 %	4
Grain	Viking Pale Cookie (bursztynowy)	0.1 kg (3%)	72 %	25
Grain	Castlemalting Cara Crystal 150 EBC	0.2 kg (6%)	74 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	30 g	60 min	5.3 %
Boil	Fuggles	30 g	10 min	5.3 %
Aroma (end of boil)	Fuggles	40 g	0 min	5.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP051 - California Ale V Yeast	Ale	Slant	100 ml	White Labs