

# #1 Bitter

- Gravity **11 BLG**
- ABV ---
- IBU **82**
- SRM **5.5**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

## Mash information

- Mash efficiency **66 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **16.4 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**

## Mash step by step

- Heat up **12.3 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3.5 kg (85.4%)	85 %	7
Grain	Weyermann - Caramunich	0.5 kg (12.2%)	80 %	---
Grain	Weyermann pszeniczny ciemny	0.1 kg (2.4%)	80 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	35 g	60 min	9.5 %
Boil	Marynka	25 g	20 min	9.5 %
Boil	Marynka	40 g	10 min	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	10 g	---

## Notes

- Pierwsza warka wyszła przyjemnie chmielowa nuta  
*Dec 21, 2016, 12:56 PM*