

## #76 American Bitter

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **23**
- SRM **7.8**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **4 %**
- Size with trub loss **25 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **29.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Malteurop Pale Ale	2 kg (44.4%)	82 %	6
Grain	Malteurop Wiedeński	2 kg (44.4%)	79 %	10
Grain	Strzegom Karmel 150	0.3 kg (6.7%)	75 %	150
Grain	Karmelowy Czerwony	0.2 kg (4.4%)	75 %	59

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	12 g	60 min	10 %
Boil	Simcoe	10 g	30 min	13.7 %
Boil	Simcoe	20 g	0 min	13.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Slant	200 ml	Fermentum Mobile