

## #038 American Stout

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **70**
- SRM **29.6**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **8 %**
- Size with trub loss **20.5 liter(s)**
- Boil time **65 min**
- Evaporation rate **7 %/h**
- Boil size **26.1 liter(s)**

### Mash information

- Mash efficiency **62 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **30.9 liter(s)**
- Total mash volume **38.6 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **30.9 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **2.9 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.2 kg (38.6%)	80 %	5
Grain	Viking Pilsner malt	3 kg (36.2%)	82 %	4
Grain	Platki owsiane	0.6 kg (7.2%)	85 %	3
Grain	Weyermann - Chocolate Rye	0.6 kg (7.2%)	20 %	493
Sugar	cukier	0.56 kg (6.8%)	100 %	---
Grain	Weyermann - Carafa II	0.32 kg (3.9%)	70 %	837

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	30 g	60 min	12.7 %
Boil	lunga	15 g	60 min	9.4 %
Aroma (end of boil)	amarillo	30 g	10 min	8.9 %
Aroma (end of boil)	Simcoe	20 g	10 min	12.7 %
Aroma (end of boil)	El Dorado	20 g	10 min	11.1 %
Dry Hop	Simcoe	100 g	3 day(s)	12.7 %
Dry Hop	El Dorado	30 g	3 day(s)	11.1 %
Dry Hop	Amarillo	20 g	3 day(s)	8.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	23 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc T	1.25 g	Boil	10 min
Other	pożywka dla drożdży Wyeast	3 g	Boil	10 min