

## american stout

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **53**
- SRM **32.9**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **49.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **60.5 liter(s)**

### Mash information

- Mash efficiency **84 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **39.6 liter(s)**
- Total mash volume **51.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **39.6 liter(s)** of strike water to **74.1C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **77C**
- Sparge using **32.9 liter(s)** of **76C** water or to achieve **60.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	7 kg (58.3%)	80 %	5
Grain	Monachijski	3 kg (25%)	80 %	16
Grain	Płatki owsiane	0.5 kg (4.2%)	60 %	3
Grain	Strzegom Karmel 300	0.4 kg (3.3%)	70 %	299
Grain	Strzegom Czekoladowy ciemny	0.5 kg (4.2%)	68 %	1200
Grain	Jęczmień palony	0.6 kg (5%)	55 %	1250

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	10 %
Boil	Centennial	40 g	30 min	10.5 %
Boil	Citra	40 g	30 min	12 %
Aroma (end of boil)	Centennial	50 g	5 min	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Slant	250 ml	safale