

## stout

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **18**
- SRM **27.2**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **10 %**
- Size with trub loss **49.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **59.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **35.6 liter(s)**
- Total mash volume **46.4 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **35.6 liter(s)** of strike water to **74.1C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **20 min** at **72C**
- Sparge using **34.6 liter(s)** of **76C** water or to achieve **59.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Bel	9 kg (83.3%)	79 %	4
Grain	Strzegom Karmel 300	0.6 kg (5.6%)	70 %	299
Grain	Strzegom Czekoladowy jasny	0.6 kg (5.6%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.4 kg (3.7%)	68 %	1200
Grain	Strzegom pszenica prażona	0.1 kg (0.9%)	70 %	1000
Grain	Viking Barwiący	0.1 kg (0.9%)	65 %	1400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Lublin (Lubelski)	30 g	20 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11 g	---

### Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Flavor	laktoza	150 g	Boil	20 min