

American Stout

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **54**
- SRM **37.1**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **11.2 liter(s)**
- Total mash volume **14.4 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **11.2 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **6 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	1.5 kg (47%)	80 %	8
Grain	Strzegom Monachijski typ II	0.5 kg (15.7%)	79 %	22
Grain	Żytni	0.5 kg (15.7%)	85 %	8
Grain	Słód Caramunich Typ II Weyermann	0.2 kg (6.3%)	73 %	120
Grain	Fawcett - Pale Chocolate	0.1 kg (3.1%)	71 %	600
Grain	Weyermann - Dehusked Carafo II	0.1 kg (3.1%)	70 %	837
Grain	Carafo	0.14 kg (4.4%)	70 %	664
Grain	Jęczmień palony	0.15 kg (4.7%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook PL	15 g	60 min	10 %
Aroma (end of boil)	Citra	10 g	10 min	13.5 %
Aroma (end of boil)	Chinook PL	10 g	10 min	10 %
Aroma (end of boil)	Citra	10 g	5 min	13.5 %

Aroma (end of boil)	Mosaic	10 g	5 min	12 %
Whirlpool	Mosaic	40 g	0 min	12 %
Whirlpool	Citra	40 g	0 min	13.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności - starter	Ale	Liquid	1000 ml	Fermentum Mobile