

# Amarillo stout

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- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **39**
- SRM **49**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **4 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **23.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **16.9 liter(s)**
- Total mash volume **23.1 liter(s)**

## Steps

- Temp **70 C**, Time **1 min**
- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.9 liter(s)** of strike water to **74.5C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **70C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	5 kg (80%)	80 %	7
Grain	Jęczmień palony	0.5 kg (8%)	55 %	985
Grain	Strzegom Czekoladowy 1200	0.2 kg (3.2%)	68 %	1202
Grain	Carafa II	0.4 kg (6.4%)	70 %	812
Grain	Caraaroma	0.15 kg (2.4%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %
Boil	Amarillo	10 g	30 min	7.5 %
Boil	Amarillo	10 g	20 min	7.5 %
Boil	Amarillo	10 g	10 min	7.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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us-05	Ale	Slant	50 ml	fermentis
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