

# Barrel Aged Stout

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- Gravity **23.3 BLG**
- ABV **10.7 %**
- IBU **45**
- SRM **34.1**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **28.8 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **19 liter(s)**
- Total mash volume **28.5 liter(s)**

## Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **19 liter(s)** of strike water to **75C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (52.6%)	82 %	4
Grain	Pszeniczny	1.5 kg (15.8%)	83 %	4
Grain	Strzegom Wiedeński	1 kg (10.5%)	79 %	10
Grain	Carafa II	0.5 kg (5.3%)	70 %	812
Grain	Strzegom Czekoladowy jasny	0.5 kg (5.3%)	68 %	400
Grain	Caramel/Crystal Malt - 40L	1 kg (10.5%)	74 %	79

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	60 g	60 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lutra OYL-071	Ale	Slant	100 ml	Omega

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	4 g	Mash	60 min
Water Agent	Chlorek wapnia	7 g	Mash	60 min
Water Agent	Kreda(Redukwas)	19 g	Mash	60 min
Water Agent	Kwas mlekowy 80%	1.7 g	Mash	0 min

## Notes

- Kwas mlekowy 80% 1.7ml na 30l wody do wyśładzania  
Profil wody(słodowy): /Ca-159.2/Mg-4/Na-4/Cl-96.3/SO4-62.5/HCO3-277/  
Fermentacja:3 dni w 20\*C później temp. pokojowa.  
*Feb 10, 2022, 1:12 PM*