

# Brown Porter

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **16**
- SRM **15.8**
- Style **Brown Porter**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

## Mash information

- Mash efficiency **86 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

## Steps

- Temp **64 C**, Time **10 min**
- Temp **70 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **16.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **10 min** at **64C**
- Keep mash **45 min** at **70C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	4 kg (74.1%)	79 %	10
Grain	Strzegom Czekoladowy jasny	0.5 kg (9.3%)	68 %	400
Grain	Castlemalting - Cara Clair	0.5 kg (9.3%)	78 %	4
Grain	Płatki owsiane	0.4 kg (7.4%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	60 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lutra OYL-071	Ale	Slant	50 ml	Omega
Oslo	Ale	Slant	50 ml	---

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	3 g	Mash	60 min
Water Agent	Chlorek wapnia	6 g	Mash	60 min
Water Agent	Redukwas(kreda)	7 g	Mash	60 min
Water Agent	Kwas mlekowy 80%	1.3 g	Mash	0 min

## Notes

- 1.3ml kwasu mlekowego do 25l wody do wyśładzania. Profil wody słodowy: Ca-115/ Mg-4/ Na-4/ Cl-98.5/ SO4-57.8/ HCO3-145/  
*Jan 8, 2022, 11:37 PM*