

# K.O.PALnia

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **26**
- SRM **34.1**
- Style **Dry Stout**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **15.9 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 **65 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **11.2 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.2 kg (37.5%)	80 %	4
Grain	Strzegom Wiedeński	1.2 kg (37.5%)	79 %	10
Grain	Cara-Pils/Dextrine	0.2 kg (6.3%)	72 %	4
Grain	Strzegom Czekoladowy ciemny	0.2 kg (6.3%)	68 %	1200
Grain	Jęczmień palony	0.15 kg (4.7%)	55 %	985
Grain	Strzegom Bursztynowy	0.25 kg (7.8%)	70 %	49

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	50 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	400 ml	Fermentis

## Notes

- Czekoladowe, palone słydy dodajemy przy temp. 72°C

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

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