

# Pine Stout

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- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **52**
- SRM **31.6**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **21.7 liter(s)**
- Total mash volume **29.8 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **21.7 liter(s)** of strike water to **75.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **26 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	6 kg (74.5%)	80 %	4
Grain	Pszeniczny	0.6 kg (7.5%)	85 %	4
Grain	Żytni	0.7 kg (8.7%)	85 %	8
Grain	Roasted Barley	0.25 kg (3.1%)	55 %	591
Grain	Wheat, Roasted	0.25 kg (3.1%)	54.3 %	837
Grain	Black Barley (Roast Barley)	0.25 kg (3.1%)	55 %	985

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Bravo	20 g	35 min	15.8 %
Whirlpool	Simcoe	50 g	20 min	12.5 %
Whirlpool	Bravo	30 g	20 min	15.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lutra	Ale	Slant	100 ml	---

## Extras

Type	Name	Amount	Use for	Time
Spice	Młode pędy sosny	200 g	Boil	10 min
Fining	Whirlfloc	2 g	Boil	15 min
Water Agent	Gips piwowarski	4 g	Mash	---
Spice	Młode pędy sosny	300 g	Secondary	5 day(s)