

Pine Stout

- 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) |