

# PAN TU NIE STOUT

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **78**
- SRM **29**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount        | Yield | EBC  |
|-------|-----------------------------|---------------|-------|------|
| Grain | Strzegom Pale Ale           | 5 kg (89.3%)  | 79 %  | 6    |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (3.6%) | 68 %  | 1200 |
| Grain | Jęczmień palony             | 0.2 kg (3.6%) | 55 %  | 985  |
| Grain | Caraaroma                   | 0.2 kg (3.6%) | 78 %  | 400  |

## Hops

| Use for | Name              | Amount | Time     | Alpha acid |
|---------|-------------------|--------|----------|------------|
| Boil    | Marynka           | 50 g   | 60 min   | 10 %       |
| Boil    | Magnum            | 7 g    | 60 min   | 13.5 %     |
| Boil    | Lublin (Lubelski) | 20 g   | 60 min   | 4 %        |
| Boil    | Centennial        | 30 g   | 5 min    | 10.5 %     |
| Dry Hop | Centennial        | 20 g   | 7 day(s) | 10.5 %     |

## Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale  | Dry  | 11 g   | ---        |