

# forest stout

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **42**
- SRM **32.1**
- Style **Foreign Extra 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 **5 %/h**
- Boil size **24.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **17.8 liter(s)**
- Total mash volume **23.3 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **17.8 liter(s)** of strike water to **70.9C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield | EBC  |
|-------|-----------------------------|----------------|-------|------|
| Grain | Strzegom Pale Ale           | 4 kg (72.1%)   | 83 %  | 6    |
| Grain | Karmelowy Jasny 30EBC       | 0.5 kg (9%)    | 75 %  | 30   |
| Grain | Strzegom Pszeniczny         | 0.5 kg (9%)    | 81 %  | 6    |
| Grain | Jęczmień palony             | 0.3 kg (5.4%)  | 55 %  | 985  |
| Grain | Strzegom Czekoladowy ciemny | 0.25 kg (4.5%) | 68 %  | 1200 |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Citra   | 30 g   | 60 min | 12 %       |
| Aroma (end of boil) | Ekuanot | 15 g   | 5 min  | 14 %       |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |