

# stout

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **20**
- SRM **37.6**
- Style **Sweet 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 **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **20.6 liter(s)**

## Steps

- Temp **67 C**, Time **80 min**
- Temp **70 C**, Time **10 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **15.4 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **10 min** at **70C**
- Keep mash **10 min** at **77C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield  | EBC  |
|-------|-----------------------------|----------------|--------|------|
| Grain | Viking Pale Ale malt        | 3 kg (53.1%)   | 80 %   | 4.5  |
| Grain | Strzegom Karmel 150         | 0.5 kg (8.8%)  | 75 %   | 150  |
| Grain | Monachijski                 | 0.5 kg (8.8%)  | 80 %   | 16   |
| Grain | Pszeniczny                  | 0.5 kg (8.8%)  | 85 %   | 4    |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (5.3%)  | 68 %   | 1200 |
| Grain | Jęczmień palony             | 0.35 kg (6.2%) | 55 %   | 985  |
| Sugar | Milk Sugar (Lactose)        | 0.5 kg (8.8%)  | 76.1 % | 0    |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 20 g   | 60 min | 10 %       |

## Yeasts

| Name                     | Type | Form | Amount | Laboratory |
|--------------------------|------|------|--------|------------|
| Gozdawa Pure Ale Yeast 7 | Ale  | Dry  | 10 g   | ---        |

## Extras

| Type   | Name    | Amount | Use for | Time   |
|--------|---------|--------|---------|--------|
| Flavor | laktoza | 500 g  | Boil    | 10 min |