

# Xmas Stout

- Gravity **17.1 BLG**
- ABV ---
- IBU **42**
- SRM **63.3**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **28.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **30.1 liter(s)**

## Steps

- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **23.4 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount        | Yield  | EBC  |
|-------|-----------------------------|---------------|--------|------|
| Grain | Strzegom Pale Ale           | 4 kg (57.1%)  | 79 %   | 6    |
| Grain | Strzegom Karmel 150         | 1 kg (14.3%)  | 75 %   | 150  |
| Grain | Żytni                       | 0.5 kg (7.1%) | 85 %   | 8    |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (7.1%) | 68 %   | 1200 |
| Grain | Płatki owsiane              | 0.4 kg (5.7%) | 85 %   | 3    |
| Sugar | Milk Sugar (Lactose)        | 0.3 kg (4.3%) | 76.1 % | 0    |
| Grain | Jęczmień palony             | 0.3 kg (4.3%) | 55 %   | 985  |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 30 g   | 60 min | 10 %       |
| Boil    | Perle   | 30 g   | 30 min | 7 %        |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|             |     |       |        |        |
|-------------|-----|-------|--------|--------|
| Safale S-04 | Ale | Slant | 200 ml | Safale |
|-------------|-----|-------|--------|--------|

### Extras

| Type  | Name              | Amount  | Use for | Time   |
|-------|-------------------|---------|---------|--------|
| Spice | cynamon           | 15.2 g  | Boil    | 15 min |
| Spice | goździki          | 10.15 g | Boil    | 15 min |
| Spice | kardamon          | 3.5 g   | Boil    | 15 min |
| Spice | skórka pomarańczy | 20 g    | Boil    | 10 min |