

## Stout christmas

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- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **29**
- SRM **64.1**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

### Steps

- Temp **55 C**, Time **15 min**
- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **24.5 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **90 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **8.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount        | Yield  | EBC  |
|-------|----------------------|---------------|--------|------|
| Grain | Pilzneński           | 3 kg (40%)    | 81 %   | 4    |
| Grain | Viking Golden ale    | 1 kg (13.3%)  | 80 %   | 14   |
| Grain | Żytni                | 1 kg (13.3%)  | 85 %   | 8    |
| Grain | Strzegom Karmel 600  | 1 kg (13.3%)  | 68 %   | 601  |
| Grain | Chocolate Malt (UK)  | 1 kg (13.3%)  | 73 %   | 1200 |
| Sugar | Milk Sugar (Lactose) | 0.5 kg (6.7%) | 76.1 % | 0    |

### Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | lunga | 30 g   | 60 min | 11 %       |

### Yeasts

| Name                  | Type | Form | Amount | Laboratory |
|-----------------------|------|------|--------|------------|
| Safale US-05          | Ale  | Dry  | 22 g   | Safale     |
| Danstar - Windsor Ale | Ale  | Dry  | 22 g   | Danstar    |

### Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

| Type        | Name                | Amount | Use for | Time   |
|-------------|---------------------|--------|---------|--------|
| Water Agent | gips piwowarski     | 6 g    | Mash    | 90 min |
| Flavor      | wanilia laska       | 1 g    | Boil    | 5 min  |
| Flavor      | Zest z 2 pomarańczy | 30 g   | Boil    | 5 min  |
| Flavor      | Godziki 5 sztuk     | 1 g    | Boil    | 5 min  |
| Flavor      | Cynamon 1/2 laski   | 20 g   | Boil    | 5 min  |