

Stout christmas

- 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 |