

Xmas Stout

- Gravity **21.3 BLG**
- ABV **9.5 %**
- IBU **33**
- SRM **42.5**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **28.5 liter(s)**
- Total mash volume **36.7 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 **28.5 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 **5.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|--------|------|
| Grain | Strzegom Pale Ale | 5 kg (57.8%) | 79 % | 6 |
| Grain | Pszeniczny | 1 kg (11.6%) | 85 % | 4 |
| Grain | Strzegom Karmel 150 | 0.5 kg (5.8%) | 75 % | 150 |
| Grain | Żytni | 0.5 kg (5.8%) | 85 % | 8 |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (5.8%) | 68 % | 1200 |
| Grain | Płatki owsiane | 0.4 kg (4.6%) | 85 % | 3 |
| Sugar | Milk Sugar (Lactose) | 0.5 kg (5.8%) | 76.1 % | 0 |
| Grain | Jęczmień palony | 0.25 kg (2.9%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 10 % |
| Boil | Marynka | 20 g | 20 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|-------------|-------------|---------------|-------------------|
| FM12 W szkocką kratę | Ale | Liquid | 100 ml | Fermentum Mobile |

Extras

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