

xmas porter

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **25**
- SRM **26.7**
- Style **Brown Porter**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **19.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.1 liter(s)**
- Total mash volume **16.2 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **12.1 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **0 min** at **76C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **19.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|-------|------|
| Grain | Briess - Pale Ale Malt | 2.3 kg (56.8%) | 80 % | 7 |
| Grain | Strzegom Wiedeński | 1 kg (24.7%) | 79 % | 10 |
| Grain | Brown Malt (British Chocolate) | 0.4 kg (9.9%) | 70 % | 200 |
| Grain | Słód Caramunich Typ II Weyermann | 0.15 kg (3.7%) | 73 % | 120 |
| Grain | Carafa II | 0.1 kg (2.5%) | 70 % | 1200 |
| Grain | Czekoladowy | 0.1 kg (2.5%) | 60 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------------|--------|--------|------------|
| Boil | Nelson Sauvín | 16 g | 70 min | 10.7 % |