

Christmas Ale

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **28**
- SRM **31.6**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **28.8 liter(s)**

Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22.4 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt | 5 kg (78.1%) | 80 % | 5 |
| Grain | Monachijski | 0.5 kg (7.8%) | 80 % | 16 |
| Grain | płatki jęczmienne | 0.4 kg (6.3%) | 80 % | 5 |
| Grain | Słód czekoladowy Viking | 0.25 kg (3.9%) | 68 % | 1200 |
| Grain | Jęczmień palony | 0.25 kg (3.9%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Sybilla | 50 g | 55 min | 4.6 % |
| Boil | Oktawia | 30 g | 5 min | 9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|--------|--------|------------------|
| FM12 W szkocką kratę | Ale | Liquid | 30 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------|-----------------|--------|---------|-------|
| Spice | Zestaw przypraw | 30 g | Boil | 5 min |