

## Bożonarodzeniowe (Christmas Ale)

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **8**
- SRM **3.6**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **38.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **46.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **45 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **73 C**, Time **20 min**

### Mash step by step

- Heat up **36 liter(s)** of strike water to **67.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **20 min** at **73C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **46.8 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount       | Yield | EBC |
|-------|---------------------|--------------|-------|-----|
| Grain | Strzegom Pilzneński | 4 kg (67.5%) | 80 %  | 4   |

### Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Lublin (Lubelski) | 30 g   | 10 min | 2.8 %      |