

## Balluff Stout wigilijny

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **39**
- SRM **35.3**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **28.9 liter(s)**

### Steps

- Temp **65 C**, Time **70 min**
- Temp **72 C**, Time **10 min**

### Mash step by step

- Heat up **20.6 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **70 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **21.9 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount        | Yield  | EBC  |
|-------|----------------------------------|---------------|--------|------|
| Grain | Castle malting Pale Ale          | 5 kg (60.6%)  | 80 %   | 4    |
| Grain | Strzegom Pszeniczny              | 0.7 kg (8.5%) | 81 %   | 6    |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.5 kg (6.1%) | 73 %   | 900  |
| Grain | Melanoiden Malt                  | 0.25 kg (3%)  | 80 %   | 39   |
| Grain | Castle Cafe                      | 0.2 kg (2.4%) | 75.5 % | 480  |
| Grain | Jęczmień palony                  | 0.3 kg (3.6%) | 55 %   | 985  |
| Grain | Weyermann - Carapils             | 0.5 kg (6.1%) | 78 %   | 4    |
| Grain | Płatki owsiane                   | 0.7 kg (8.5%) | 85 %   | 3    |
| Grain | Simpsons - Roasted Barley        | 0.1 kg (1.2%) | 70 %   | 1084 |

### Hops

| Use for             | Name   | Amount | Time   | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil                | lunga  | 20 g   | 50 min | 11 %       |
| Boil                | Galaxy | 20 g   | 50 min | 13.6 %     |
| Aroma (end of boil) | lunga  | 15 g   | 10 min | 11 %       |

**Yeasts**

| Name  | Type | Form  | Amount | Laboratory |
|-------|------|-------|--------|------------|
| US-05 | Ale  | Slant | 200 ml | Safale     |