

## Irish stout +forest

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- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **25**
- SRM **31.1**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

| Type  | Name                            | Amount       | Yield | EBC  |
|-------|---------------------------------|--------------|-------|------|
| Grain | Viking Pale Ale malt            | 3.6 kg (72%) | 80 %  | 5    |
| Grain | Weyermann - Melanoiden Malt     | 0.7 kg (14%) | 81 %  | 53   |
| Grain | Pszeniczny Czekoladowy wayerman | 0.25 kg (5%) | 73 %  | 1001 |
| Grain | Jęczmień palony viking malt     | 0.25 kg (5%) | 55 %  | 985  |
| Grain | Viking Czekoladowy ciemny       | 0.2 kg (4%)  | 67 %  | 900  |

### Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | First Gold | 35 g   | 60 min | 5.6 %      |
| Aroma (end of boil) | First Gold | 15 g   | 10 min | 5.6 %      |
| Aroma (end of boil) | Fuggles    | 15 g   | 10 min | 4.2 %      |

### Yeasts

| Name    | Type | Form  | Amount | Laboratory |
|---------|------|-------|--------|------------|
| Lax whc | Ale  | Slant | 300 ml | Whc        |

### Extras

| Type        | Name         | Amount | Use for | Time   |
|-------------|--------------|--------|---------|--------|
| Fining      | Whirlflock   | 1 g    | Boil    | 5 min  |
| Water Agent | Kreda        | 6 g    | Mash    | 60 min |
| Fining      | Łuska ryżowa | 100 g  | Mash    | 5 min  |
| Herb        | pędy swierku | 130 g  | Boil    | 30 min |