

# Dies Natalis Solis Invicti - Xmas Stout Świąteczny

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **22**
- SRM **39.1**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **66 C**, Time **40 min**
- Temp **70 C**, Time **20 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **70C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

| Type  | Name                               | Amount        | Yield  | EBC  |
|-------|------------------------------------|---------------|--------|------|
| Grain | Viking Pale Ale malt               | 3 kg (48.4%)  | 80 %   | 5    |
| Grain | Strzegom Wiedeński                 | 1 kg (16.1%)  | 79 %   | 10   |
| Grain | Grodziski pszeniczny wędzony dębem | 0.5 kg (8.1%) | 80 %   | 3    |
| Grain | Fawcett - Pszeniczny Czekoladowy   | 0.5 kg (8.1%) | 73 %   | 1001 |
| Grain | Weyermann Specjal W                | 0.25 kg (4%)  | 68 %   | 300  |
| Grain | Żytni                              | 0.25 kg (4%)  | 85 %   | 8    |
| Grain | Oats, Flaked                       | 0.25 kg (4%)  | 80 %   | 2    |
| Grain | Jęczmień palony                    | 0.25 kg (4%)  | 55 %   | 985  |
| Sugar | Milk Sugar (Lactose)               | 0.2 kg (3.2%) | 76.1 % | 0    |

## Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | lunga | 20 g   | 60 min | 11 %       |

## Yeasts

| <b>Name</b>          | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|----------------------|-------------|-------------|---------------|-------------------|
| FM12 W szkocką kratę | Ale         | Slant       | 400 ml        | Fermentum Mobile  |

### **Extras**

| <b>Type</b> | <b>Name</b>       | <b>Amount</b> | <b>Use for</b> | <b>Time</b> |
|-------------|-------------------|---------------|----------------|-------------|
| Spice       | Tonkowiec wonny   | 5 g           | Secondary      | 7 day(s)    |
| Spice       | Zest pomarańczowy | 20 g          | Secondary      | 7 day(s)    |
| Spice       | Kakałszale        | 250 g         | Boil           | 10 min      |
| Spice       | Cynamon           | 10 g          | Boil           | 10 min      |
| Spice       | Imbir             | 10 g          | Boil           | 10 min      |