

# 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

Name	Type	Form	Amount	Laboratory
FM12 W szkocką kratę	Ale	Slant	400 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
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