

- Gravity **12.4 BLG**
- ABV ---
- IBU **27**
- SRM **39.6**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **12.3 %/h**
- Boil size **27 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **16.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **75C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Malting company of Ireland - Irish Ale Malt	4 kg (74.1%)	80.5 %	7
Grain	Black Barley (Roast Barley) crushed	0.5 kg (9.3%)	50 %	1300
Grain	Bestmalz - Cara Munich Type III	0.3 kg (5.6%)	75 %	160
Grain	Crisp - Wheat Malt (EBC 2.5-4.5)	0.4 kg (7.4%)	85 %	4
Grain	Weyermann - chocolate malt	0.2 kg (3.7%)	50 %	900

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	40 min	8.6 %
Boil	Tradition	30 g	40 min	5.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	1000 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	3 g	Boil	5 min