

## Run for cover

- Gravity **15.9 BLG**
- ABV ---
- IBU **48**
- SRM **46.7**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **320 liter(s)**
- Trub loss **5 %**
- Size with trub loss **336 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **369.6 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **255 liter(s)**
- Total mash volume **340 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **255 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **199.6 liter(s)** of **76C** water or to achieve **369.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Fawcett Maris Otter	50 kg (55.6%)	75 %	7
Grain	Fawcett Wheat Malt	20 kg (22.2%)	73 %	3
Grain	Fawcett Rye Malt	5 kg (5.6%)	75 %	3
Grain	Fawcett Chocolate Malt	2 kg (2.2%)	70 %	1150
Grain	Fawcett Roast Wheat	3 kg (3.3%)	70 %	850
Grain	Fawcett Black Malt	3 kg (3.3%)	70 %	1500
Grain	Fawcett Amber Malt	2 kg (2.2%)	70 %	130
Adjunct	łuska gryczana	5 kg (5.6%)	1 %	1

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	400 g	60 min	15.5 %
Aroma (end of boil)	Chinook	200 g	10 min	14 %
Aroma (end of boil)	Chinook	300 g	0 min	14 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Danstar Nottingham	Ale	Dry	400 g	Lallemand Danstar
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### Extras

Type	Name	Amount	Use for	Time
Spice	słodka skórka pomarańczy	100 g	Boil	5 min
Spice	skórka cytrynowa	100 g	Boil	5 min
Spice	cynamon	1 g	Boil	5 min
Spice	imbir	1 g	Boil	5 min