

## troche guinness

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **26**
- SRM **27.7**
- Style **Dry Stout**

### 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 **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (72.7%)	81 %	4
Grain	Płatki owsiane	0.5 kg (9.1%)	85 %	3
Grain	Płatki pszeniczne	0.5 kg (9.1%)	85 %	3
Grain	Jęczmień palony	0.5 kg (9.1%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	30 g	50 min	4.6 %
Boil	Hallertau	30 g	30 min	4.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M42 New World Strong Ale	Ale	Dry	11 g	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
Fining	whirflock	2 g	Boil	15 min