

24 the marshal

- Gravity **16.6 BLG**
- ABV ---
- IBU **36**
- SRM **33.9**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **15 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **28 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.9 liter(s)**
- Total mash volume **31.9 liter(s)**

Steps

- Temp **67 C**, Time **120 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **23.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **120 min** at **67C**
- Keep mash **10 min** at **75C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Malting company of ireland - Irish Ale Malt	4.85 kg (60.8%)	80.5 %	7
Grain	Bestmalz - Cara Munich Type II	0.24 kg (3%)	75 %	120
Grain	Black Barley (Roast Barley) crushed	0.48 kg (6%)	50 %	1300
Grain	Weyermann - Pale Wheat Malt	1.25 kg (15.7%)	85 %	4
Grain	weyermann - abbey malt	0.8 kg (10%)	75 %	45
Grain	Bestmalz - Cara Aromatic	0.36 kg (4.5%)	78 %	50

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	70 g	50 min	5.5 %
Aroma (end of boil)	Hersbrucker	30 g	8 min	2.3 %
Aroma (end of boil)	Huell Melon	15 g	8 min	7.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Dry	100 g	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	3 g	Boil	10 min