

- Gravity **13.1 BLG**
- ABV ---
- IBU **25**
- SRM **17.2**
- Style **Irish Red Ale**

### Batch size

- Expected quantity of finished beer **17.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **19.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.6 liter(s)**
- Total mash volume **18.2 liter(s)**

### Steps

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

### Mash step by step

- Heat up **13.6 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **75C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Irish Pale Ale Malt	4 kg (87.9%)	80 %	5
Grain	weyermann - caramunich T2	0.3 kg (6.6%)	55 %	110
Grain	Weyermann - Caraamber	0.2 kg (4.4%)	75 %	65
Grain	Black Barley (Roast Barley)	0.05 kg (1.1%)	55 %	1367

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Willamette	50 g	5 min	4.5 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	5 min	3.7 %
Boil	Marynka	17 g	30 min	8.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
WLP004 - Irish Ale Yeast	Ale	Liquid	35 ml	White Labs