

# IRA

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **21**
- SRM **12**
- Style **Irish Red Ale**

## 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.4 liter(s)**
- Total mash volume **24.5 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **18.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (49%)	81 %	4
Grain	Strzegom Monachijski typ II	1 kg (16.3%)	79 %	22
Grain	Viking Pale Ale malt	0.7 kg (11.4%)	80 %	5
Grain	Weyermann - Caraamber	0.3 kg (4.9%)	75 %	65
Grain	Weyermann - Carared	1 kg (16.3%)	75 %	45
Grain	Słód Caramunich Typ II Weyermann	0.02 kg (0.3%)	73 %	120
Grain	Caraaroma	0.1 kg (1.6%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	50 min	7.4 %
Boil	Challenger	15 g	30 min	5.8 %
Boil	Challenger	5 g	30 min	5.1 %
Boil	Challenger	10 g	10 min	5.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	1000 ml	starter drożdżowy