

## ira 2/2019

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **31**
- SRM **8**
- Style **Irish Red Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.7 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **18.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **30.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (64.5%)	80 %	4
Grain	Strzegom Monachijski typ II	0.5 kg (8.1%)	79 %	22
Grain	Viking Pale Ale malt	0.5 kg (8.1%)	80 %	5
Grain	Karmelowy Czerwony	0.5 kg (8.1%)	75 %	59
Grain	Bestmalz Carmel Pils	0.5 kg (8.1%)	75 %	5
Grain	Brown	0.1 kg (1.6%)	70 %	300
Grain	Pszeniczny	0.1 kg (1.6%)	85 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	summit szyszka	20 g	60 min	15.8 %
Boil	Saaz (Czech) aromat	20 g	15 min	4.5 %
Boil	Saaz (Czech) aromat	10 g	5 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M84 Bohemian Lager	Lager	Slant	100 ml	Mangrove Jack's
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### Extras

Type	Name	Amount	Use for	Time
Herb	trawa cytrynowa	7 g	Boil	5 min