

# Celtic Cross

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- Gravity **13.6 BLG**
- ABV ---
- IBU **23**
- SRM **16.5**
- 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 **80 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **19.4 liter(s)**

## Steps

- Temp **52 C**, Time **0 min**
- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **14.8 liter(s)** of strike water to **57C**
- Add grains
- Keep mash **0 min** at **52C**
- Keep mash **40 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Maris Otter	3 kg (64.9%)	81 %	6
Grain	Strzegom Pilzneński	1 kg (21.6%)	80 %	4
Grain	pale crystal	0.55 kg (11.9%)	76 %	90
Grain	Jęczmień palony	0.04 kg (0.9%)	55 %	985
Grain	Chocolate Malt (UK)	0.03 kg (0.6%)	73 %	887

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	20 g	60 min	5.8 %
Boil	Challenger	15 g	30 min	5.8 %
Aroma (end of boil)	Challenger	15 g	5 min	5.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	5 min