

#2.1 Minium - Irish Red Ale - +10% chmielu

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **19**
- SRM **11.6**
- Style **Irish Red Ale**

Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **39.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **50.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **31.2 liter(s)**
- Total mash volume **41.6 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **31.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **29.5 liter(s)** of **76C** water or to achieve **50.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------------|-----------------------------|-----------------|-------|-----|
| Grain | Maris Otter Crisp | 9.4 kg (89.3%) | 83 % | 6 |
| Grain | Caramel/Crystal Malt - 40L | 0.355 kg (3.4%) | 74 % | 79 |
| Grain | Caramel/Crystal Malt - 120L | 0.355 kg (3.4%) | 72 % | 236 |
| Dry Extract | WES ekstrakt słodowy jasny | 0.12 kg (1.1%) | 100 % | 30 |
| Grain | Fawcett - Dark Crystal | 0.3 kg (2.8%) | 71 % | 300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | Kent Goldings | 55 g | 60 min | 5.5 % |
| Boil | East Kent Goldings | 11 g | 60 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|--------|---------|------------------|
| FM13 Irlandzkie Ciemności | Ale | Liquid | 2000 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------|--------|---------|--------|
| Fining | Whirfloc | 2.5 g | Boil | 15 min |

Notes

- Na podstawie <https://byo.com/article/irish-red-ale-style-profile/>

Mill the grains and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 153 °F (67 °C). Hold the mash at 153 °F (67 °C) until enzymatic conversion is complete. Raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (24.6 L) and the gravity is 1.041 (10.3 °P).

The total wort boil time is 90 minutes. Add the bittering hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings with 15 minutes left in the boil. Chill the wort rapidly to 66 °F (19 °C), let the break material settle, rack to the fermenter and aerate thoroughly. Pitch the yeast. Use 10 grams of properly rehydrated dry yeast, 2 liquid yeast packages, or make an appropriate yeast starter. Ferment the wort at 66 °F (19 °C). When the fermentation is finished, carbonate the beer from 2 to 2.5 volumes.

Wody dolać do 13.2 BLG.\

/* Jest więcej chmielu niż poprzednio, ze względu na rozcieńczanie

/* Tym razem większe wysycenie - czyli 2,5 CO2
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