

# MANIFEST

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- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **20**
- SRM **17.8**
- Style **Irish Red Ale**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **20.5 liter(s)**

## Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **15.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **20.1 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Castle	2.5 kg (48.7%)	80 %	8
Grain	Monachijski Bestmalz (Muich Malt)	0.5 kg (9.7%)	80 %	16
Grain	Viking Malt Red Ale	0.5 kg (9.7%)	75 %	70
Grain	Caramunich® typ I Weyermann	0.33 kg (6.4%)	73 %	80
Grain	Biscuit Malt	0.3 kg (5.8%)	79 %	50
Grain	Kukurydza	0.3 kg (5.8%)	--- %	3
Grain	Abbey Castle	0.3 kg (5.8%)	80 %	45
Grain	Karmel 600 Viking Malt	0.2 kg (3.9%)	68 %	601
Grain	Chocolate Viking Malt	0.2 kg (3.9%)	73 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Extra Styrian Dana	15 g	60 min	10.8 %
Aroma (end of boil)	Extra Styrian Dana	10 g	10 min	10.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-189	Ale	Dry	11 g	---

## Extras

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