

Pale Ale Irish #12 bez chmielenia

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **30**
- SRM **5.3**
- Style **Irish Red Ale**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **51.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **31.2 liter(s)**
- Total mash volume **39.4 liter(s)**

Steps

- Temp **58 C**, Time **15 min**
- Temp **65 C**, Time **45 min**
- Temp **69 C**, Time **20 min**

Mash step by step

- Heat up **31.2 liter(s)** of strike water to **63C**
- Add grains
- Keep mash **15 min** at **58C**
- Keep mash **45 min** at **65C**
- Keep mash **20 min** at **69C**
- Sparge using **28.4 liter(s)** of **76C** water or to achieve **51.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 6.8 kg (82.9%) | 80 % | 5 |
| Grain | Biscuit Malt | 0.4 kg (4.9%) | 79 % | 45 |
| Grain | Bestmalz Red X | 1 kg (12.2%) | 79 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil | Magnum | 42 g | 45 min | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|------|--------|------------|
| Saflager W 34/70 | Lager | Dry | 30 g | Fermentis |