

Irlandzkie

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **22**
- SRM **28.9**
- Style **Schwarzbier**

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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.8 liter(s)**
- Total mash volume **23.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **17.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Munich Malt	5 kg (84.1%)	78 %	18
Grain	Strzegom Karmel 150	0.692 kg (11.6%)	75 %	150
Grain	Viking Barwiący	0.25 kg (4.2%)	65 %	1400

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Spalt	20 g	60 min	5.5 %
Boil	Hallertau Tradition	20 g	60 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	11.5 g	Fermentis