

# scottish rye ale

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **23**
- SRM **13.2**
- Style **Scottish Export 80/-**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.8 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **9.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **6.3 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Pilzneński           | 2.5 kg (78.1%) | 81 %  | 4   |
| Grain | Żytni                | 0.5 kg (15.6%) | 85 %  | 8   |
| Grain | Weyermann - Carapils | 0.1 kg (3.1%)  | 78 %  | 4   |
| Grain | Weyermann - Carafa I | 0.1 kg (3.1%)  | 70 %  | 690 |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 15 g   | 45 min | 7.1 %      |
| Boil    | Marynka | 15 g   | 5 min  | 7.1 %      |

## Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM12 W szkocką kratę | Ale  | Liquid | 100 ml | Fermentum Mobile |

## Notes

- carafa 1 special szybki cold brew

whirflock  
*Jan 5, 2021, 11:45 AM*