

# Scottish Export

- Gravity **13.8 BLG**
- ABV ---
- IBU **24**
- SRM **22.1**
- Style **Scottish Export 80/-**

## Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **120 min**
- Evaporation rate **8 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **21.5 liter(s)**

## Steps

- Temp **66 C**, Time **20 min**
- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **73C**
- Add grains
- Keep mash **20 min** at **66C**
- Keep mash **30 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter Crisp	4.8 kg (96%)	83 %	6
Grain	Carafa II	0.15 kg (3%)	70 %	812
Grain	Jęczmień palony	0.05 kg (1%)	55 %	985

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	22 g	60 min	8 %
Boil	Saaz	15 g	10 min	3.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM12 W szkocką kratę	Ale	Liquid	175 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Flavor	Płatki dębowe	20 g	Secondary	14 day(s)

## Notes

- Do zacierania: 3 g chlorku wapnia + 2 g gipsu piwowarskiego  
Do gotowania: 3 g chlorku wapnia + 1 g gipsu piwowarskiego  
Na koniec gotowania: 2 g pożywki dla drożdży  
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