

TB SA

- Gravity **9.9 BLG**
- ABV ---
- IBU **21**
- SRM **17.7**
- Style **Scottish Export 80/-**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **26.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **14.4 liter(s)**

Steps

- Temp **70 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10.8 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **70 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	2.8 kg (77.8%)	80 %	4
Grain	Simpsons - Crystal Medium	0.5 kg (13.9%)	74 %	108
Grain	Brown Malt (British Chocolate)	0.2 kg (5.6%)	70 %	128
Grain	Briess - Chocolate Malt	0.1 kg (2.8%)	60 %	690

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Kent Goldings	30 g	60 min	5.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M03 UK Dark Ale	Ale	Dry	10 g	Mangrove Jack's