

## TB SA

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- 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 |