

## Brown 12\*

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **23**
- SRM **17.9**
- Style **American Brown Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **24.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 liter(s)**

### Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **14 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.4 kg (85%)	80 %	5
Grain	Carahell	0.4 kg (10%)	77 %	26
Grain	Carafa II	0.2 kg (5%)	70 %	1150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	15 g	60 min	7 %
Aroma (end of boil)	Challenger	15 g	15 min	7 %
Aroma (end of boil)	Sovereign	30 g	5 min	6.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale