

Kroowa

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **35**
- SRM **53.8**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **0 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **19.5 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.7 liter(s)**
- Total mash volume **14.3 liter(s)**

Steps

- Temp **68 C**, Time **55 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **10.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **55 min** at **68C**
- Keep mash **10 min** at **75C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **19.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale Malt	1.8 kg (45.9%)	80 %	15
Grain	Viking Munich Malt Dark	0.75 kg (19.1%)	78 %	57
Grain	Barley, Flaked	0.4 kg (10.2%)	70 %	7
Grain	Caramel/Crystal Malt - 60L	0.2 kg (5.1%)	74 %	314
Grain	Viking Chocolate Dark Malt	0.2 kg (5.1%)	71 %	2400
Grain	Viking Caramel 600	0.12 kg (3.1%)	68 %	1600
Grain	Carafa II	0.1 kg (2.6%)	70 %	2164
Sugar	Milk Sugar (Lactose)	0.35 kg (8.9%)	76.1 %	-1

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	12 g	60 min	11.5 %
Boil	Bramling Cross	15 g	20 min	7.5 %
Boil	Bramling Cross	15 g	10 min	7.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's -M15 Empire Ale	Ale	Dry	10 g	Mangrove Jack's
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