

Ginger bread stout

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **35**
- SRM **32.9**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	3.5 kg (66%)	85 %	7
Grain	Cara Munich	0.3 kg (5.7%)	--- %	160
Grain	Roast barley	0.5 kg (9.4%)	--- %	1300
Grain	Oats, Flaked	0.5 kg (9.4%)	80 %	2
Grain	Barley, Flaked	0.5 kg (9.4%)	70 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	30 g	60 min	10.5 %
Aroma (end of boil)	East Kent Goldings	25 g	5 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
M15	Ale	Dry	10 g	Mangrove jacks

Extras

Type	Name	Amount	Use for	Time
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Spice	Cardamom, Black	2 g	Boil	15 min
Herb	Ginger Root	5 g	Boil	15 min
Spice	Star Anise	2 g	Boil	15 min
Flavor	Melasa	5 g	Boil	15 min