

# F-117 Nighthawk

- Gravity **28.7 BLG**
- ABV **14 %**
- IBU **53**
- SRM **48.2**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **26.4 liter(s)**
- Total mash volume **35.2 liter(s)**

## Steps

- Temp **70 C**, Time **60 min**

## Mash step by step

- Heat up **26.4 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **60 min** at **70C**
- Sparge using **1.4 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (56.8%)	85 %	7
Grain	Weyermann - Caraamber	0.5 kg (5.7%)	75 %	65
Grain	Pszeniczny	1 kg (11.4%)	85 %	4
Grain	Cara Crystal	1 kg (11.4%)	85 %	150
Grain	Weyermann - Carafa I	0.5 kg (5.7%)	70 %	690
Grain	Black Barley (Roast Barley)	0.3 kg (3.4%)	55 %	985
Grain	Oats, Flaked	0.5 kg (5.7%)	80 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	30 g	60 min	17 %
Boil	Warrior	15 g	10 min	17 %
Boil	Vic Secret	15 g	10 min	16.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	150 ml	Safale

## Extras

Type	Name	Amount	Use for	Time
Flavor	Oak Chips	100 g	Secondary	8 day(s)