

## #3 Mad Santa

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- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **21**
- SRM **21.2**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **27.1 liter(s)**
- Total mash volume **34.9 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **27.1 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **2 min** at **78C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Malting Vlnna	1 kg (12.9%)	80 %	5
Grain	Castle Malting Cara Honey	0.25 kg (3.2%)	70 %	70
Grain	Castle Malting Special B	0.5 kg (6.5%)	77 %	300
Grain	Castle Malting Pilsen	5 kg (64.5%)	82 %	3.5
Grain	Castle Malting Crystal	0.25 kg (3.2%)	78 %	150
Grain	Castle Malting Cafe	0.25 kg (3.2%)	75 %	500
Grain	Castle Malting Acid	0.5 kg (6.5%)	74 %	10

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	50 g	60 min	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M41 Belgian Ale	Ale	Dry	20 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
Other	Suszona skórka pomarańczy	10 g	Boil	1 min
Other	Gałka muszkatułowa	10 g	Boil	1 min
Other	Kolendra	10 g	Boil	1 min
Other	Laska wanilii	10 g	Boil	1 min
Other	Goździki	10 g	Boil	1 min