AAA Mad Jack's

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **26**
- SRM **11.5**
- Style **American Amber Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **29.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **33 liter(s)**

Steps

- Temp **68.5 C**, Time **90 min**
- Temp **75.6 C**, Time **20 min**

Mash step by step

- Heat up **24.8 liter(s)** of strike water to **76.6C**
- Add grains
- Keep mash **90 min** at **68.5C**
- Keep mash **20 min** at **75.6C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **29.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5.77 kg *(69.9%)*	80 %	5
Grain	Strzegom Monachijski typ I	0.91 kg *(11%)*	79 %	16
Grain	Biscuit Malt	0.59 kg *(7.1%)*	79 %	45
Grain	Karmelowy żytni Strzegom	0.58 kg *(7%)*	75 %	150
Grain	Briess - Carapils Malt	0.41 kg *(5%)*	74 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Equinox	18 g	70 min	13.5 %
Boil	Cascade	35 g	5 min	5.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	180 ml	Safale