

## #11 SMaSH\_PA\_Mackinac

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **32**
- SRM **4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **17.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **18.8 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (86.2%)	80 %	5
Grain	Barley, Flaked	0.8 kg (13.8%)	70 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mackinac	15 g	60 min	9.2 %
Boil	Mackinac	15 g	30 min	9.2 %
Boil	Mackinac	20 g	20 min	9.2 %
Dry Hop	Mackinac	150 g	3 day(s)	9.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM53 Voss kveik	Ale	Slant	150 ml	---

### Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	0.5 g	Boil	10 min

### Notes

- woda oaza,biedronka 36(18/18)\_Light colored and hoppy  
gips piwowarski 3/3  
sól 1/1  
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