

## MS11 PT

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **31**
- SRM **3.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **3 %/h**
- Boil size **30.6 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **18.6 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (83.3%)	80 %	5
Grain	Pszeniczny	1 kg (16.7%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	35 g	60 min	9.5 %
Boil	Amarillo	20 g	5 min	9.5 %
Dry Hop	Amarillo	45 g	3 day(s)	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10.5 g	Fermentis