

## MS20

- Gravity **8 BLG**
- ABV **3.1 %**
- IBU **13**
- SRM **6.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.4 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6 liter(s)**
- Total mash volume **8 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **75 C**, Time **5 min**

### Mash step by step

- Heat up **6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **75C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **19.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.25 kg (62.5%)	80 %	5
Grain	Pszeniczny	0.25 kg (12.5%)	85 %	4
Grain	Strzegom Wiedeński	0.25 kg (12.5%)	79 %	10
Grain	Strzegom Karmel 150	0.25 kg (12.5%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Sorachi Ace	5 g	60 min	10 %
Aroma (end of boil)	Sorachi Ace	20 g	3 min	10 %
Dry Hop	Sorachi Ace	25 g	3 day(s)	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Flavor	sok cytrynowy	100 g	Secondary	10 day(s)