

## MS23

- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **70**
- SRM **9.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **75 C**, Time **5 min**

### Mash step by step

- Heat up **19.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **5 min** at **75C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

| Type  | Name                   | Amount         | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt   | 3.5 kg (53.8%) | 80 %  | 5   |
| Grain | Pszeniczny             | 1.5 kg (23.1%) | 85 %  | 4   |
| Grain | Strzegom Wiedeński     | 1 kg (15.4%)   | 79 %  | 10  |
| Grain | Strzegom Karmel<br>150 | 0.5 kg (7.7%)  | 75 %  | 150 |

### Hops

| Use for             | Name        | Amount | Time   | Alpha acid |
|---------------------|-------------|--------|--------|------------|
| Boil                | Eureka!     | 40 g   | 50 min | 18 %       |
| Aroma (end of boil) | Eureka!     | 30 g   | 3 min  | 18 %       |
| Aroma (end of boil) | Eureka!     | 30 g   | 1 min  | 18 %       |
| Aroma (end of boil) | Sorachi Ace | 50 g   | 1 min  | 10 %       |

### Yeasts

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