

# Winter Imperial stout

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **47**
- SRM **39**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.25 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **32.4 liter(s)**

## Steps

- Temp **64 C**, Time **90 min**

## Mash step by step

- Heat up **24.8 liter(s)** of strike water to **70.8C**
- Add grains
- Keep mash **90 min** at **64C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type           | Name                        | Amount          | Yield | EBC  |
|----------------|-----------------------------|-----------------|-------|------|
| Grain          | Viking Pale Ale malt        | 6 kg (76.2%)    | 80 %  | 5    |
| Grain          | Weyermann - Chocolate Rye   | 0.375 kg (4.8%) | 20 %  | 493  |
| Grain          | Strzegom Czekoladowy ciemny | 0.5 kg (6.3%)   | 68 %  | 1200 |
| Grain          | Płatki jęczmienne           | 0.5 kg (6.3%)   | 80 %  | 4    |
| Grain          | Jęczmień palony             | 0.25 kg (3.2%)  | 55 %  | 985  |
| Liquid Extract | WES ekstrakt słodowy jasny  | 0.25 kg (3.2%)  | 80 %  | ---  |

## Hops

| Use for   | Name         | Amount | Time     | Alpha acid |
|-----------|--------------|--------|----------|------------|
| Boil      | Willamette   | 35 g   | 60 min   | 4.5 %      |
| Boil      | Pacific Jade | 35 g   | 60 min   | 12.4 %     |
| Whirlpool | Willamette   | 35 g   | 1 min    | 4.5 %      |
| Whirlpool | Pacific Jade | 35 g   | 1 min    | 12.4 %     |
| Dry Hop   | Willamette   | 30 g   | 7 day(s) | 4.5 %      |
| Dry Hop   | Pacific Jade | 30 g   | 7 day(s) | 12.4 %     |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|              |     |     |        |           |
|--------------|-----|-----|--------|-----------|
| Safale US-05 | Ale | Dry | 11.5 g | fermentis |
|--------------|-----|-----|--------|-----------|

### Extras

| Type   | Name               | Amount | Use for   | Time     |
|--------|--------------------|--------|-----------|----------|
| Spice  | czarny pieprz      | 10 g   | Boil      | 0 min    |
| Flavor | kawa aromatyzowana | 50 g   | Boil      | 1 min    |
| Flavor | kawa armomatzowana | 150 g  | Secondary | 7 day(s) |
| Flavor | laktoza            | 500 g  | Boil      | 1 min    |