

## american stout

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **37**
- SRM **28**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **3 %**
- Size with trub loss **62.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **71.9 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36.4 liter(s)**
- Total mash volume **48.5 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **10 min**
- Temp **50 C**, Time **0 min**

### Mash step by step

- Heat up **36.4 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **0 min** at **50C**
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **75C**
- Sparge using **47.6 liter(s)** of **76C** water or to achieve **71.9 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount         | Yield | EBC  |
|-------|--------------------------------|----------------|-------|------|
| Grain | Viking Pilsner malt            | 4.2 kg (33.8%) | 82 %  | 4    |
| Grain | Strzegom Monachijski typ II    | 3 kg (24.1%)   | 79 %  | 22   |
| Grain | castle malt wheat blanc nature | 1 kg (8%)      | 83 %  | 5    |
| Grain | Karmelowy Czerwony             | 1.6 kg (12.9%) | 75 %  | 59   |
| Grain | Płatki owsiane                 | 1.1 kg (8.8%)  | 85 %  | 3    |
| Grain | Jęczmień palony                | 0.75 kg (6%)   | 55 %  | 985  |
| Grain | Strzegom Czekoladowy ciemny    | 0.47 kg (3.8%) | 68 %  | 1200 |
| Sugar | cukier refermentacja           | 0.32 kg (2.6%) | --- % | ---  |

### Hops

| Use for | Name    | Amount | Time     | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil    | Marynka | 70 g   | 60 min   | 9.5 %      |
| Boil    | Nugget  | 50 g   | 10 min   | 15 %       |
| Dry Hop | Nugget  | 120 g  | 5 day(s) | 13 %       |

## Yeasts

| Name        | Type | Form  | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| safale s-05 | Ale  | Slant | 290 ml | ---        |

## Extras

| Type   | Name                         | Amount | Use for   | Time     |
|--------|------------------------------|--------|-----------|----------|
| Flavor | wiórki kokosowe na 20l cicha | 200 g  | Secondary | 4 day(s) |
| Flavor | kawa cicha kolejne 20l       | 10 g   | Secondary | 4 day(s) |
| Flavor | nugget 20 l cichej           | 120 g  | Secondary | 4 day(s) |