

## 17# American stout

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **41**
- SRM **29.1**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **24.1 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25 liter(s)**

### Steps

- Temp **70 C**, Time **70 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **18.8 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **70 min** at **70C**
- Keep mash **10 min** at **76C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount          | Yield | EBC  |
|-------|-----------------------------|-----------------|-------|------|
| Grain | Viking Pale Ale malt        | 3.85 kg (61.6%) | 80 %  | 5    |
| Grain | Monachijski                 | 1.2 kg (19.2%)  | 80 %  | 16   |
| Grain | Caramel/Crystal Malt - 120L | 0.3 kg (4.8%)   | 72 %  | 236  |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (3.2%)   | 68 %  | 1200 |
| Grain | Strzegom pszenica prażona   | 0.2 kg (3.2%)   | 70 %  | 1000 |
| Grain | Płatki pszenne              | 0.25 kg (4%)    | 85 %  | 3    |
| Grain | Płatki owsiane              | 0.25 kg (4%)    | 85 %  | 3    |

### Hops

| Use for             | Name                   | Amount | Time     | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 35 g   | 30 min   | 15.5 %     |
| Aroma (end of boil) | Cascade                | 50 g   | 1 min    | 6 %        |
| Dry Hop             | Mosaic                 | 50 g   | 3 day(s) | 10 %       |

### Yeasts

| Name         | Type | Form  | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale  | Slant | 100 ml | Fermentis  |