

## american stout

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **47**
- SRM **43.8**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.9 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **23 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **15 min**

### Mash step by step

- Heat up **17.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **76C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **24.9 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield | EBC  |
|-------|---------------------------|----------------|-------|------|
| Grain | Weyermann - Pale Ale Malt | 4 kg (69.6%)   | 85 %  | 7    |
| Grain | Caraaroma                 | 0.5 kg (8.7%)  | 78 %  | 400  |
| Grain | Jęczmień palony           | 0.25 kg (4.3%) | 55 %  | 985  |
| Grain | Weyermann - Carafa III    | 0.5 kg (8.7%)  | 70 %  | 1024 |
| Grain | Płatki owsiane            | 0.5 kg (8.7%)  | 85 %  | 3    |

### Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Aroma (end of boil) | Cascade | 50 g   | 0 min  | 6.9 %      |
| Boil                | lunga   | 50 g   | 40 min | 11 %       |
| Aroma (end of boil) | Simcoe  | 50 g   | 0 min  | 11.5 %     |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 23 g   | Fermentis  |