

american stout

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **53**
- SRM **32.9**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **49.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **60.5 liter(s)**

Mash information

- Mash efficiency **84 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **39.6 liter(s)**
- Total mash volume **51.6 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **39.6 liter(s)** of strike water to **74.1C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **77C**
- Sparge using **32.9 liter(s)** of **76C** water or to achieve **60.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt | 7 kg (58.3%) | 80 % | 5 |
| Grain | Monachijski | 3 kg (25%) | 80 % | 16 |
| Grain | Płatki owsiane | 0.5 kg (4.2%) | 60 % | 3 |
| Grain | Strzegom Karmel 300 | 0.4 kg (3.3%) | 70 % | 299 |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (4.2%) | 68 % | 1200 |
| Grain | Jęczmień palony | 0.6 kg (5%) | 55 % | 1250 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Marynka | 40 g | 60 min | 10 % |
| Boil | Centennial | 40 g | 30 min | 10.5 % |
| Boil | Citra | 40 g | 30 min | 12 % |
| Aroma (end of boil) | Centennial | 50 g | 5 min | 10.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| us-05 | Ale | Slant | 250 ml | safale |