

## American stout

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **47**
- SRM **31.9**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **29.2 liter(s)**

### Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **25.8 liter(s)**
- Total mash volume **34.4 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **25.8 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **29.2 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount        | Yield | EBC  |
|-------|-----------------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt        | 3 kg (34.9%)  | 80 %  | 5    |
| Grain | Strzegom Pilzneński         | 2 kg (23.3%)  | 80 %  | 4    |
| Grain | Carared                     | 0.5 kg (5.8%) | 75 %  | 39   |
| Grain | Melanoiden Malt             | 0.5 kg (5.8%) | 80 %  | 39   |
| Grain | Pszeniczny                  | 1 kg (11.6%)  | 85 %  | 20   |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (2.3%) | 68 %  | 1200 |
| Grain | Jęczmień palony             | 0.4 kg (4.7%) | 55 %  | 985  |
| Grain | Carabohemian                | 0.2 kg (2.3%) | 70 %  | 200  |
| Grain | Płatki owsiane              | 0.8 kg (9.3%) | 60 %  | 3    |

### Hops

| Use for | Name     | Amount | Time   | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil    | Citra    | 20 g   | 60 min | 12 %       |
| Boil    | Citra    | 30 g   | 15 min | 12 %       |
| Boil    | Amarillo | 15 g   | 15 min | 9.5 %      |
| Boil    | Mosaic   | 15 g   | 15 min | 10 %       |

|           |          |      |          |       |
|-----------|----------|------|----------|-------|
| Whirlpool | Amarillo | 15 g | 0 min    | 9.5 % |
| Whirlpool | Mosaic   | 15 g | 0 min    | 10 %  |
| Dry Hop   | Mosaic   | 30 g | 5 day(s) | 10 %  |
| Dry Hop   | Amarillo | 30 g | 5 day(s) | 9.5 % |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 200 ml | Fermentum Mobile |

## Extras

| Type        | Name           | Amount | Use for | Time   |
|-------------|----------------|--------|---------|--------|
| Water Agent | Gips           | 5 g    | Mash    | 60 min |
| Fining      | Mech irlandzki | 5 g    | Boil    | 15 min |