

AS

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **42**
- SRM **35.7**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **28.7 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **28.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Pilzneński | 2.5 kg (40.3%) | 81 % | 4 |
| Grain | Castle Pale Ale | 2.5 kg (40.3%) | 80 % | 8 |
| Grain | Pszeniczny | 0.3 kg (4.8%) | 85 % | 4 |
| Grain | Chocolate Malt (US) | 0.3 kg (4.8%) | 60 % | 690 |
| Grain | Jęczmień palony | 0.3 kg (4.8%) | 55 % | 985 |
| Grain | Black (Patent) Malt | 0.3 kg (4.8%) | 55 % | 985 |

Hops

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

Yeasts

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