

American Stout z resztek z poprzedniego sezonu

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **72**
- SRM **36.7**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **7 liter(s)**
- Trub loss **5 %**
- Size with trub loss **7.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **8.9 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.9 liter(s)**
- Total mash volume **10.6 liter(s)**

Steps

- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **7.9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **3.7 liter(s)** of **76C** water or to achieve **8.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|-----------------|-------|-----|
| Grain | Pilzneński | 1 kg (37.7%) | 81 % | 4 |
| Grain | Monachijski | 0.7 kg (26.4%) | 80 % | 16 |
| Grain | Pszeniczny | 0.35 kg (13.2%) | 85 % | 4 |
| Grain | Jęczmień palony | 0.25 kg (9.4%) | 55 % | 985 |
| Grain | Płatki owsiane | 0.15 kg (5.7%) | 85 % | 3 |
| Grain | Żytni | 0.15 kg (5.7%) | 85 % | 8 |
| Grain | Strzegom Karmel 150 | 0.05 kg (1.9%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 5 g | 60 min | 15.5 % |
| Boil | Columbus/Tomahawk/Zeus | 5 g | 20 min | 15.5 % |
| Boil | Citra | 5 g | 20 min | 12 % |
| Boil | Citra | 10 g | 5 min | 12 % |
| Boil | Columbus/Tomahawk/Zeus | 10 g | 5 min | 15.5 % |
| Boil | Simcoe | 10 g | 5 min | 13.2 % |

| | | | | |
|------|----------|------|-------|-------|
| Boil | Amarillo | 10 g | 5 min | 9.5 % |
|------|----------|------|-------|-------|

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 8.75 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|-------|
| Water Agent | Gips piwowarski | 4.38 g | Mash | 0 min |