

Stout grudniowy

- Gravity **15 BLG**
- ABV ---
- IBU **47**
- SRM **39.1**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **28 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.4 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **20.9 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14.8 liter(s)** of strike water to **73.1C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **19.4 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 5 kg (81.3%) | 80 % | 4 |
| Grain | Płatki jęczmienne | 0.5 kg (8.1%) | 85 % | 3 |
| Grain | Jęczmień palony | 0.3 kg (4.9%) | 55 % | 985 |
| Grain | Strzegom Czekoladowy jasny | 0.1 kg (1.6%) | 68 % | 400 |
| Grain | Strzegom Barwiący | 0.1 kg (1.6%) | 68 % | 1300 |
| Grain | Strzegom Karmel 300 | 0.15 kg (2.4%) | 70 % | 299 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | junga | 35 g | 60 min | 11.6 % |
| Boil | Lublin (Lubelski) | 35 g | 15 min | 3.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | Safale |

Extras

Recipe has been printed via **BREWNES.com** - a complex online solution for homebrewers to track brewing process easily.

| Type | Name | Amount | Use for | Time |
|-------|-----------------------|--------|---------|--------|
| Spice | cynamon | 10 g | Boil | 60 min |
| Spice | goździki | 10 g | Boil | 60 min |
| Spice | kolendra | 15 g | Boil | 60 min |
| Spice | imbir | 10 g | Boil | 60 min |
| Spice | jałowiec - 10 ziaren | 0 g | Boil | 60 min |
| Spice | skórka z 1 pomarańczy | 0 g | Boil | 60 min |
| Spice | skórka z 1 cytryny | 0 g | Boil | 60 min |