

Stout piernikowy z wysłodzin risa

- Gravity **19.3 BLG**
- ABV **8.4 %**
- IBU **24**
- SRM **39.2**
- Style **Oatmeal Stout**

Batch size

- Expected quantity of finished beer **32 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **43.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37 liter(s)**
- Total mash volume **49.3 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **64 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **37 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **76C**
- Sparge using **18.8 liter(s)** of **76C** water or to achieve **43.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Weyermann - Pale Ale Malt | 7.15 kg (58%) | 85 % | 7 |
| Grain | Karmelowy Jasny 30EBC | 1 kg (8.1%) | 75 % | 30 |
| Grain | Strzegom Monachijski typ II | 0.55 kg (4.5%) | 79 % | 22 |
| Grain | Oats, Flaked | 1.8 kg (14.6%) | 80 % | 2 |
| Grain | Strzegom Karmel 600 | 1 kg (8.1%) | 68 % | 601 |
| Grain | Weyermann - Carafa III | 0.55 kg (4.5%) | 70 % | 1024 |
| Grain | Carafa | 0.28 kg (2.3%) | 70 % | 664 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Chinook | 57 g | 60 min | 8.5 % |
| Boil | Hallertau | 40 g | 0 min | 4.4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|-------------|-------------|---------------|-------------------|
| Safale US-05 | Ale | Slant | 110 ml | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|--------------------------------|---------------|----------------|-------------|
| Spice | Przyprawa korzenna do piernika | 54 g | Boil | 15 min |
| Spice | Cynamon | 10 g | Boil | 15 min |
| Spice | Gozdziki | 5 g | Boil | 15 min |
| Spice | Zest z 4 pomaranczy | 10 g | Boil | 15 min |