

## Stout z dodatkami

- Gravity **12 BLG**
- ABV ---
- IBU **60**
- SRM **40**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**

### Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount        | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Strzegom Pale Ale           | 4 kg (83.3%)  | 79 %  | 6   |
| Grain | Strzegom Czekoladowy ciemny | 0.4 kg (8.3%) | 68 %  | 800 |
| Grain | Jęczmień palony             | 0.2 kg (4.2%) | 55 %  | 985 |
| Grain | płatki owsiane              | 0.2 kg (4.2%) | 50 %  | 6   |

### Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Pilgrim    | 30 g   | 60 min | 10 %       |
| Boil    | Challenger | 30 g   | 60 min | 7 %        |

### Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-04 | Ale  | Dry  | 11.5 g | ---        |

### Extras

| Type   | Name          | Amount | Use for   | Time      |
|--------|---------------|--------|-----------|-----------|
| Flavor | Kawa          | 100 g  | Secondary | 14 day(s) |
| Flavor | kakao         | 40 g   | Secondary | 14 day(s) |
| Flavor | laska wanilii | 4 g    | Secondary | 14 day(s) |