

#B004 Stout

- Gravity **20 BLG**
- ABV **8.8 %**
- IBU **21**
- SRM **98.7**

Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **24.9 liter(s)** of **76C** water or to achieve **32.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|----------------|------------------------------------|----------------|-------|------|
| Grain | Grodziski pszeniczny wędzony dębem | 2 kg (23.8%) | 80 % | 3 |
| Grain | Strzegom Czekoladowy ciemny | 1 kg (11.9%) | 68 % | 1200 |
| Grain | Jęczmień palony | 0.5 kg (6%) | 55 % | 985 |
| Grain | Barwiący | 0.5 kg (6%) | 55 % | 985 |
| Liquid Extract | ekstrakt słodowy ciemny Bruntal | 3.4 kg (40.5%) | 90 % | 621 |
| Sugar | glukoza | 1 kg (11.9%) | 100 % | --- |

Hops

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

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|-------|--------|------------|
| US05 | Ale | Slant | 300 ml | home |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|--------|
| Water Agent | Gips piwowarski | 5 g | Boil | 60 min |
| Water Agent | Kwas mlekowy | 2 g | Boil | 60 min |