

Mleczno - owsiany stout 16 BLG

- Gravity **13.6 BLG**
- ABV ---
- IBU **27**
- SRM **40**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Oats, Flaked | 1.2 kg (19%) | 80 % | 2 |
| Grain | Pilzneński | 2 kg (31.7%) | 81 % | 4 |
| Grain | Monachijski | 2 kg (31.7%) | 80 % | 16 |
| Grain | Strzegom Karmel 600 | 0.3 kg (4.8%) | 68 % | 601 |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (4.8%) | 68 % | 1200 |
| Grain | kawowy jasny | 0.2 kg (3.2%) | 68 % | 250 |
| Grain | Jęczmień palony | 0.3 kg (4.8%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 30 g | 70 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|--------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale | Liquid | 100 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|--------|---------|--------|---------|--------|
| Flavor | Laktoza | 1000 g | Boil | 15 min |

Notes

- Dodatek laktozy zwiększa blg o 2,5. Należy pamiętać o tym przy pomiarze blg pod koniec fermentacji.
Fermentacja burzliwa 7 dni w temp 20 C.
Fermentacja cicha 7 dni w temp 20 C.
Butelkować z dodatkiem 150 g ekstraktu ciemnego.
Re-fermentacja 7-10 dni.
Gotowe po 21 dniach leżakowania.
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