

# 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.  
*Jan 6, 2016, 9:11 PM*