

## #31 Milk Stout (Dark Necessities)

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **20**
- SRM **34.6**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **12.4 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13 liter(s)**
- Boil time **60 min**
- Evaporation rate **18 %/h**
- Boil size **17.6 liter(s)**

### Mash information

- Mash efficiency **84.5 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **13.5 liter(s)**

### Fermentables

| Type    | Name                       | Amount          | Yield  | EBC  |
|---------|----------------------------|-----------------|--------|------|
| Grain   | Viking Pale Ale malt       | 1.8 kg (53.7%)  | 80 %   | 5    |
| Grain   | Strzegom Monachijski typ I | 0.5 kg (14.9%)  | 79 %   | 16   |
| Grain   | Crystal                    | 0.2 kg (6%)     | 80 %   | 160  |
| Grain   | Castle Cafe                | 0.15 kg (4.5%)  | 75.5 % | 480  |
| Grain   | Jęczmień palony            | 0.15 kg (4.5%)  | 55 %   | 1000 |
| Grain   | Strzegom pszenica prażona  | 0.1 kg (3%)     | 70 %   | 1000 |
| Grain   | Carafa I Special           | 0.1 kg (3%)     | 73 %   | 900  |
| Adjunct | Milk Sugar (Lactose)       | 0.35 kg (10.4%) | 76.1 % | 0    |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Fuggles | 20 g   | 60 min | 4.7 %      |
| Boil    | Fuggles | 10 g   | 30 min | 4.7 %      |

### Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Liquid | 200 ml | Fermentum Mobile |
| Starter 2 dniowy     |      |        |        |                  |

### Extras

| Type  | Name            | Amount | Use for | Time   |
|-------|-----------------|--------|---------|--------|
| Other | Wyeast Nutrient | 1.5 g  | Boil    | 10 min |