

## Milk Stout - duże

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **36**
- SRM **32.3**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **150 liter(s)**
- Trub loss **5 %**
- Size with trub loss **157.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **189.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **140.1 liter(s)**
- Total mash volume **180.1 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **140.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **89.7 liter(s)** of **76C** water or to achieve **189.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	12.5 kg (28.6%)	81 %	4
Grain	Viking Pale Ale malt	10 kg (22.9%)	80 %	5
Grain	Weyermann - Dehusked Carafa III	3.13 kg (7.1%)	70 %	1024
Grain	Płatki owsiane	4.38 kg (10%)	85 %	3
Grain	Monachijski	6.25 kg (14.3%)	80 %	16
Grain	Strzegom Karmel 150	1.88 kg (4.3%)	75 %	150
Grain	Strzegom Karmel 600	1.88 kg (4.3%)	68 %	601
Sugar	Milk Sugar (Lactose)	3.75 kg (8.6%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	250 g	60 min	11 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	280.5 ml	Fermentum Mobile