

# Murzynek na mleku

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **28**
- SRM **38.9**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.3 liter(s)**
- Total mash volume **21.7 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **16.3 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (57.2%)	80 %	5
Grain	Strzegom Karmel 300	0.4 kg (6.5%)	70 %	299
Grain	Carabelge	0.2 kg (3.2%)	80 %	30
Grain	Strzegom Czekoladowy ciemny	0.31 kg (5%)	68 %	1200
Grain	Carafa	0.31 kg (5%)	70 %	664
Grain	Płatki owsiane	0.51 kg (8.3%)	85 %	3
Adjunct	Milk Sugar (Lactose)	0.7 kg (11.5%)	76.1 %	0
Grain	Carafa III	0.2 kg (3.2%)	70 %	1034

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Green Bullet	22 g	60 min	11 %
Boil	Lublin (Lubelski)	15 g	30 min	4 %
Whirlpool	Lublin (Lubelski)	10.01 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.51 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Spice	Cynamon	10.01 g	Boil	20 min
Spice	Laska wanilli	10.01 g	Secondary	10 day(s)

## Notes

- Po 20 min zacierania w 71 stopniach dodać słody palone.  
*Sep 23, 2017, 12:17 PM*