

# milk stout czekolada waniliowa

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **26**
- SRM **38.5**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **47.3 liter(s)**
- Total mash volume **60.8 liter(s)**

## Steps

- Temp **47 C**, Time **10 min**
- Temp **52 C**, Time **10 min**
- Temp **55 C**, Time **10 min**
- Temp **62 C**, Time **25 min**
- Temp **66 C**, Time **20 min**
- Temp **71 C**, Time **15 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **47.3 liter(s)** of strike water to **50.9C**
- Add grains
- Keep mash **10 min** at **47C**
- Keep mash **10 min** at **52C**
- Keep mash **10 min** at **55C**
- Keep mash **25 min** at **62C**
- Keep mash **20 min** at **66C**
- Keep mash **15 min** at **71C**
- Keep mash **10 min** at **77C**
- Sparge using **29.5 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	8 kg (59.3%)	80 %	5
Grain	Viking Munich Malt	1.5 kg (11.1%)	78 %	18
Grain	Viking Czekoladowy ciemny	1.5 kg (11.1%)	67 %	900
Grain	Weyermann - Carafa III	0.5 kg (3.7%)	70 %	1024
Grain	Strzegom Karmel 150	1 kg (7.4%)	75 %	150
Grain	Płatki owsiane	1 kg (7.4%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	40 g	60 min	13.5 %
Aroma (end of boil)	East Kent Goldings	30 g	5 min	5.1 %

Aroma (end of boil)	Fuggles	20 g	5 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	10 g	0 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	20 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	laktoza	1500 g	Boil	10 min

## Notes

- drożdże 26pln  
chmiele 7,50pln  
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