

Birch Milk

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **28**
- SRM **27.5**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **19.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.15 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **19.9 liter(s)**

Steps

- Temp **64 C**, Time **90 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.1 liter(s)** of strike water to **71C**
- Add grains
- Keep mash **90 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **19.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (48.3%)	80 %	5
Grain	Caramel/Crystal Malt - 10L	1.5 kg (29%)	75 %	20
Grain	Strzegom Karmel 150	0.4 kg (7.7%)	75 %	150
Grain	Jęczmień palony	0.2 kg (3.9%)	55 %	985
Grain	Strzegom Czekoladowy 400	0.2 kg (3.9%)	68 %	400
Sugar	Laktoza	0.375 kg (7.2%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	70 min	5.1 %
Boil	English Golding	30 g	15 min	4.8 %
Dry Hop	English Golding	30 g	14 day(s)	4.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Safale S-04	Ale	Slant	1000 ml	Safale
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Extras

Type	Name	Amount	Use for	Time
Flavor	ksylitol	350 g	Secondary	5 day(s)