

Milka

- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **24**
- SRM **33.1**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75.5 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.9 liter(s)**
- Total mash volume **29.5 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **22.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	2.8 kg (38.6%)	80 %	7
Grain	IREKS Pilzniejszy	0.7 kg (9.6%)	80.5 %	4
Grain	Monachijski	0.5 kg (6.9%)	80 %	16
Grain	Biscuit Malt	0.15 kg (2.1%)	79 %	45
Grain	Płatki owsiane	1.5 kg (20.7%)	85 %	3
Grain	Jęczmień palony	0.35 kg (4.8%)	55 %	985
Grain	Chocolate Thomas Fawcett	0.175 kg (2.4%)	70 %	1200
Grain	Brown Malt Thomas Fawcett	0.38 kg (5.2%)	70 %	180
Sugar	Milk Sugar (Lactose)	0.7 kg (9.6%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	45 min	12.9 %
Aroma (end of boil)	lunga	20 g	10 min	12.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
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FM13 Irlandzkie Ciemności	Ale	Slant	200 ml	Fermentum Mobile
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Extras

Type	Name	Amount	Use for	Time
Flavor	laktoza	0.7 g	Boil	15 min