

plynny piernik

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **12**
- SRM **7.8**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

Steps

- Temp **68 C**, Time **45 min**
- Temp **70 C**, Time **15 min**

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **15 min** at **70C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	1 kg (22.2%)	85 %	4
Liquid Extract	Miód Gryczany (Buckwheat Honey)	0.3 kg (6.7%)	95 %	40
Grain	Płatki pszeniczne	0.5 kg (11.1%)	60 %	3
Grain	Płatki owsiane	0.5 kg (11.1%)	60 %	3
Grain	Karmelowy Pszeniczny Strzegom	0.2 kg (4.4%)	79 %	150
Grain	Strzegom Monachijski typ II	1 kg (22.2%)	79 %	22
Grain	Pilzneński	0.3 kg (6.7%)	81 %	4
Liquid Extract	miód rzepakowy	0.7 kg (15.6%)	95 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	15 g	60 min	5.4 %
Aroma (end of boil)	Lublin (Lubelski)	16 g	10 min	5.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M41 Belgian Ale	Ale	Dry	11.5 g	Mangrove Jack's
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Extras

Type	Name	Amount	Use for	Time
Spice	curacao	15 g	Boil	30 min
Spice	cauracao	20 g	Boil	10 min
Spice	cynamon	4 g	Boil	10 min
Spice	cynamon laska	2 g	Boil	30 min
Spice	goździk	6 g	Boil	10 min
Spice	goździk	5 g	Boil	30 min