

# Piernikowa Doris

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **22**
- SRM **27**
- Style **Christmas/Winter Specialty Spiced Beer**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **15 min** at **78C**
- Sparge using **8.2 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (53.4%)	80 %	5
Grain	Strzegom Monachijski typ II	0.7 kg (18.7%)	79 %	22
Grain	Simpsons Brown Malt	0.31 kg (8.3%)	69 %	500
Grain	Płatki żytnie	0.25 kg (6.7%)	60 %	4
Sugar	Miód Gryczany (Buckwheat Honey)	0.2 kg (5.3%)	70 %	40
Grain	Bestmalz Caramel Hell	0.15 kg (4%)	80 %	30
Grain	Jęczmień palony	0.1 kg (2.7%)	55 %	985
Sugar	cukier muscovado	0.034 kg (0.9%)	100 %	60

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	5 g	30 min	14 %
Aroma (end of boil)	Magnat	30 g	5 min	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M15 Empire Ale	Ale	Dry	5 g	Mangrove Jack's
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### Extras

Type	Name	Amount	Use for	Time
Flavor	przyprawa do piernika krukam	20 g	Boil	30 min
Flavor	cynamon	6 g	Boil	30 min
Flavor	imbir świeży	4 g	Boil	30 min
Flavor	goździki	2 g	Boil	30 min
Flavor	ziele angielskie	2 g	Boil	30 min
Flavor	gałka muszkatałowa	1 g	Boil	30 min
Flavor	kardamon	1 g	Boil	30 min
Water Agent	kwask mlekowy 80%	3 g	Mash	75 min
Water Agent	chlorek wapnia 33%	4.5 g	Mash	75 min

### Notes

- Cukier i miód dodane w 30 minucie gotowania.  
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