

## 13 Piotruś

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **16**
- SRM **41.9**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

- Temp **68 C**, Time **30 min**
- Temp **76 C**, Time **30 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **30 min** at **68C**
- Keep mash **30 min** at **76C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1 kg (19.8%)	85 %	5
Grain	Strzegom Monachijski typ I	1 kg (19.8%)	79 %	16
Grain	Karmelowy Czerwony	0.25 kg (5%)	75 %	59
Grain	Strzegom Karmel 600	1 kg (19.8%)	68 %	601
Grain	Strzegom Karmel 150	1 kg (19.8%)	75 %	150
Grain	Strzegom Czekoladowy ciemny	0.25 kg (5%)	68 %	1200
Sugar	Cukier	0.147 kg (2.9%)	100 %	---
Sugar	Laktoza	0.4 kg (7.9%)	100 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lomik	37 g	60 min	4.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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S04	Ale	Dry	11.5 g	Safale
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### Extras

Type	Name	Amount	Use for	Time
Flavor	Platki owsiane	200 g	Mash	60 min

### Notes

- Po gotowaniu 24.5 litra 15 Blg. Chłodzenie do 24.  
*Oct 28, 2017, 9:59 PM*