

## żytni książęcy

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **25**
- SRM **5**
- Style **Roggenbier**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **1 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (50%)	80 %	5
Grain	Żytni	3 kg (50%)	85 %	8

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	książęcy	20 g	10 min	7 %
Whirlpool	książęcy	80 g	30 min	7 %
Dry Hop	książęcy	150 g	2 day(s)	7 %

### Extras

Type	Name	Amount	Use for	Time
Water Agent	sól	5 g	Mash	90 min