

## Buzujący w zbożu

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **19**
- SRM **8.8**
- Style **Roggenbier**

### 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 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **22.7 liter(s)**

### Steps

- Temp **44 C**, Time **20 min**
- Temp **68 C**, Time **60 min**

### Mash step by step

- Heat up **17.3 liter(s)** of strike water to **47.7C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **60 min** at **68C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	3 kg (55.6%)	85 %	8
Grain	Caramunich® typ I	0.5 kg (9.3%)	73 %	80
Grain	Strzegom Monachijski typ II	1 kg (18.5%)	79 %	22
Grain	Viking Pale Ale malt	0.5 kg (9.3%)	80 %	5
Grain	Płatki owsiane	0.4 kg (7.4%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	35 g	70 min	4 %
Boil	Hallertau	20 g	20 min	3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	200 ml	Safale