

## 13° (Rauchbock) [A:ROGACZ I ]

- Gravity **15.9 BLG**
- ABV ---
- IBU **32**
- SRM **18.4**
- Style **Traditional Bock**

### Batch size

- Expected quantity of finished beer **23.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **24.5 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **29.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt Grusza	5 kg (71.4%)	80 %	5
Grain	Strzegom Wiedeński	1.5 kg (21.4%)	79 %	10
Grain	Strzegom Karmel 300	0.5 kg (7.1%)	70 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %
Boil	Marynka	10 g	60 min	10 %
Boil	Lublin (Lubelski)	20 g	10 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Gozdawa German Lager	Lager	Dry	7 g	---