

## NO. 19 Rye Ale

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **53**
- SRM **6.7**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **34 liter(s)**
- Trub loss **5 %**
- Size with trub loss **37.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **44.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33 liter(s)**
- Total mash volume **44 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **70 C**, Time **45 min**
- Temp **78 C**, Time **7 min**

### Mash step by step

- Heat up **33 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **45 min** at **70C**
- Keep mash **7 min** at **78C**
- Sparge using **22.9 liter(s)** of **76C** water or to achieve **44.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	6 kg (54.5%)	79 %	10
Grain	Briess - Rye Malt	3 kg (27.3%)	80 %	7
Grain	Briess - Carapils Malt	1 kg (9.1%)	74 %	3
Grain	Monachijski	1 kg (9.1%)	80 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	25 g	60 min	11 %
Boil	Sybilla	25 g	60 min	3.5 %
Boil	Cascade	100 g	30 min	6 %
Aroma (end of boil)	Centennial	100 g	3 min	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's -M15 Empire Ale	Ale	Dry	10 g	---
Mangrove Jack's M29 French Saison	Ale	Dry	10 g	---

## Notes

- 2 fermentatory po 17 litrów.  
*Apr 8, 2018, 12:52 PM*