

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **13**
- SRM **3.9**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

### Steps

- Temp **50 C**, Time **30 min**
- Temp **64 C**, Time **45 min**
- Temp **70 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **13.8 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **30 min** at **50C**
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.5 kg (32.6%)	81 %	4
Grain	Pszeniczny	2.5 kg (54.3%)	85 %	4
Grain	Strzegom Karmel 30	0.2 kg (4.3%)	75 %	30
Grain	Płatki pszeniczne	0.4 kg (8.7%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	30 g	60 min	4 %
Dry Hop	Cascade	20 g	7 day(s)	6 %

### Extras

Type	Name	Amount	Use for	Time
Other	Łuska ryżowa	250 g	Mash	15 min