

149 EAJM

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **29**
- SRM **9.1**
- Style **American Wheat or Rye Beer**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **25.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **77C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **25.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.6 kg (60%)	79 %	6
Grain	kasza gryczana	0.7 kg (11.7%)	70 %	---
Grain	Biscuit Malt	0.5 kg (8.3%)	79 %	45
Grain	Caramel/Crystal Malt - 120L	0.2 kg (3.3%)	72 %	236
Liquid Extract	syrop k	1 kg (16.7%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	43 g	90 min	4.5 %
Boil	Fuggles	21 g	30 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	14 g	5 min	4.5 %
Aroma (end of boil)	kozierad	4 g	5 min	1 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP001 - California Ale Yeast	Ale	Liquid	10 ml	White Labs