

## 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 |