

# Król Julian

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **23**
- SRM **4.7**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.8 liter(s)**
- Total mash volume **31.8 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **23.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

| Type  | Name                   | Amount         | Yield  | EBC |
|-------|------------------------|----------------|--------|-----|
| Grain | Strzegom Pilzneński    | 3.2 kg (40.3%) | 80 %   | 4   |
| Grain | Strzegom Pszeniczny    | 1.4 kg (17.6%) | 81 %   | 6   |
| Grain | Viking Pale Ale malt   | 1.6 kg (20.1%) | 80 %   | 5   |
| Grain | BESTMALZ - Best Pilsen | 0.25 kg (3.1%) | 80.5 % | 4   |
| Grain | Acid Malt              | 0.1 kg (1.3%)  | 58.7 % | 6   |
| Grain | Słód owsiany Fawcett   | 1 kg (12.6%)   | 61 %   | 5   |
| Grain | płatki jęczmienne      | 0.4 kg (5%)    | 60 %   | 4   |

## Hops

| Use for | Name        | Amount | Time     | Alpha acid |
|---------|-------------|--------|----------|------------|
| Boil    | lunga       | 13 g   | 60 min   | 11 %       |
| Boil    | Amora Preta | 7 g    | 10 min   | 11 %       |
| Boil    | Marynka     | 13 g   | 60 min   | 10 %       |
| Dry Hop | Chinook     | 10 g   | 3 day(s) | 13 %       |
| Dry Hop | Cascade     | 10 g   | 3 day(s) | 6 %        |
| Dry Hop | Centennial  | 10 g   | 3 day(s) | 10.5 %     |
| Dry Hop | Ahtanum     | 5 g    | 3 day(s) | 5 %        |

|         |        |     |          |       |
|---------|--------|-----|----------|-------|
| Dry Hop | Talus  | 5 g | 3 day(s) | 7.4 % |
| Dry Hop | Galaxy | 5 g | 3 day(s) | 17 %  |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.5 g | Fermentis  |

### Extras

| Type   | Name  | Amount | Use for  | Time      |
|--------|-------|--------|----------|-----------|
| Flavor | Mango | 850 g  | Primary  | 10 day(s) |
| Flavor | Mango | 850 g  | Bottling | ---       |