

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	---