

Bronday Koleżeński

- Gravity **20.5 BLG**
- ABV ---
- IBU **120**
- SRM **5.4**
- Style **Imperial IPA**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **10 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **22.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **67 C**, Time **55 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **55 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **22.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	5 kg (90.9%)	80 %	4
Liquid Extract	Honey	0.5 kg (9.1%)	75 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	60 min	15.1 %
Boil	Pacific Gem	50 g	15 min	13.2 %
Boil	Green Bullet	50 g	15 min	12.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-05	Ale	Slant	500 ml	Safale

Extras

Type	Name	Amount	Use for	Time
Other	drewno	100 g	Secondary	---