

# Ranger IPA

- Gravity **15 BLG**
- ABV ---
- IBU **76**
- SRM **8**
- Style **American IPA**

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

## Steps

- Temp **64 C**, Time **90 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **90 min** at **64C**
- Sparge using **21.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.9 kg (81.7%)	81 %	4
Sugar	Cukier	1 kg (16.7%)	100 %	0
Grain	Caraaroma	0.1 kg (1.7%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	40 g	60 min	12.8 %
Boil	Simcoe	30 g	30 min	13.2 %
Boil	Cascade	20 g	10 min	6 %
Aroma (end of boil)	Cascade	20 g	0 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Finning	Mech irlandzki	5 g	Boil	10 min