

# Tolus IPA Single hop

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **41**
- SRM **5.2**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **30 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **24.8 liter(s)**
- Total mash volume **32.3 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **24.8 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (66.7%)	79 %	6
Grain	Strzegom Wiedeński	1 kg (13.3%)	79 %	10
Grain	Płatki owsiane	0.5 kg (6.7%)	60 %	3
Grain	Strzegom Pilzneński	1 kg (13.3%)	80 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	20 g	60 min	12 %
Boil	Citra	15 g	30 min	12 %
Boil	talus	30 g	10 min	8 %
Aroma (end of boil)	talus	20 g	0 min	8 %
Whirlpool	talus	50 g	0 min	8 %
Dry Hop	talus	200 g	7 day(s)	8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	1000 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	10 g	Boil	10 min
Water Agent	gips	8 g	Mash	60 min
Water Agent	chlorek wapnia	3 g	Mash	60 min