

# szerszeń imperator

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **73**
- SRM **3.8**
- Style **Imperial 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 **53 C**, Time **15 min**
- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- 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	Pale Ale/Pils Crisp	4.5 kg (84.4%)	80 %	5
Grain	Monachijski	0.25 kg (4.7%)	80 %	16
Grain	Pszeniczny	0.25 kg (4.7%)	85 %	4
Adjunct	Płatki owsiane	0.33 kg (6.2%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	zula	30 g	60 min	7 %
Boil	Citra	30 g	60 min	12 %
Boil	Cascade	20 g	20 min	6 %
Boil	Citra	10 g	20 min	12 %
Boil	chinook	10 g	20 min	9.3 %
Aroma (end of boil)	zula	10 g	0 min	7 %
Aroma (end of boil)	chinook	10 g	0 min	9.3 %
Aroma (end of boil)	Cascade	10 g	0 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	150 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	5 min

### Notes

- drożdże fm52 Amerykański sen namnażane na mieszadle magnetycznym przez 14 godzin i odstane przez kolejne 20 godzin. Zadane do brzeczki z dna kolby...  
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