

## Session Rye IPA

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- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **38**
- SRM **3.8**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.2 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **12.6 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **76C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2.1 kg (58.3%)	82 %	4
Grain	Żytni - Viking Malt	1.5 kg (41.7%)	80 %	9

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	14.5 %
Boil	Amarillo	5 g	20 min	7.1 %
Boil	Cascade	5 g	20 min	6.9 %
Boil	Amarillo	10 g	5 min	7.1 %
Boil	Cascade	5 g	5 min	6.9 %
Boil	Simcoe	5 g	5 min	11.5 %
Aroma (end of boil)	Amarillo	20 g	5 min	7.1 %
Aroma (end of boil)	Cascade	20 g	5 min	6.9 %
Aroma (end of boil)	Simcoe	10 g	5 min	11.5 %
Whirlpool	Amarillo	30 g	0 min	7.1 %
Whirlpool	Cascade	20 g	0 min	6.9 %
Whirlpool	Simcoe	10 g	0 min	11.5 %
Dry Hop	Amarillo	35 g	4 day(s)	7.1 %

Dry Hop	Cascade	25 g	4 day(s)	6.9 %
Dry Hop	Simcoe	20 g	4 day(s)	11.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Liquid	500 ml	Fermentum Mobile
Starter, piwo w celu uzyskania gęstwy do wykorzystania w mocniejszym piwie.				

## Extras

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

## Notes

- Chmiele na zimno gdy temperatura spadnie poniżej 80 stopni, na 20 minut.  
*Feb 5, 2019, 10:35 PM*