

## V-IPA

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- Gravity **15.9 BLG**
- ABV ---
- IBU **66**
- SRM **4.7**
- Style **Rye IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **18.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (48.4%)	81 %	4
Grain	Płatki owsiane	1.2 kg (19.4%)	85 %	3
Grain	Żytni	1.5 kg (24.2%)	85 %	8
Grain	Pszeniczny	0.5 kg (8.1%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Columbus/Tomahawk/Zeus	30 g	15 min	15.5 %
Aroma (end of boil)	Equinox	5 g	15 min	13.1 %
Aroma (end of boil)	Galaxy	5 g	15 min	15 %
Aroma (end of boil)	Amarillo	5 g	15 min	9.5 %
Aroma (end of boil)	Amarillo	15 g	10 min	9.5 %
Aroma (end of boil)	Galaxy	15 g	10 min	15 %
Aroma (end of boil)	Equinox	15 g	10 min	13.1 %
Aroma (end of boil)	Galaxy	20 g	5 min	15 %
Aroma (end of boil)	Amarillo	20 g	5 min	9.5 %
Aroma (end of boil)	Equinox	20 g	5 min	13.1 %

Whirlpool	Galaxy	60 g	0 min	15 %
Whirlpool	Equinox	50 g	0 min	13.1 %
Whirlpool	Amarillo	40 g	0 min	9.5 %
Dry Hop	Galaxy	50 g	3 day(s)	15 %
Dry Hop	Amarillo	50 g	3 day(s)	9.5 %
Dry Hop	Equinox	50 g	3 day(s)	13.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - London Ale III	Ale	Liquid	1000 ml	Wyeast Labs