

V-IPA

- 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 |