

## Polska IPA

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **52**
- SRM **5**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **1 %**
- Size with trub loss **12.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **16.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **15.8 liter(s)**

### Steps

- Temp **51 C**, Time **10 min**
- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **12.3 liter(s)** of strike water to **55.4C**
- Add grains
- Keep mash **10 min** at **51C**
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **16.7 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński         | 1.8 kg (51.4%) | 80 %  | 4   |
| Grain | Strzegom Wiedeński          | 1.2 kg (34.3%) | 79 %  | 10  |
| Grain | Rice, Flaked                | 0.4 kg (11.4%) | 70 %  | 2   |
| Grain | Weyermann - Acidulated Malt | 0.1 kg (2.9%)  | 80 %  | 6   |

### Hops

| Use for   | Name | Amount | Time     | Alpha acid |
|-----------|------|--------|----------|------------|
| Boil      | Zula | 30 g   | 50 min   | 9.9 %      |
| Boil      | Zula | 20 g   | 3 min    | 9.9 %      |
| Boil      | Zula | 20 g   | 1 min    | 9.9 %      |
| Whirlpool | Zula | 120 g  | 0 min    | 9.9 %      |
| Dry Hop   | Zula | 60 g   | 2 day(s) | 9.9 %      |

### Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|             |                 |       |          |        |
|-------------|-----------------|-------|----------|--------|
| Water Agent | gips piwowarski | 2 g   | Mash     | ---    |
| Water Agent | kwas mlekowy    | 2 g   | Mash     | ---    |
| Fining      | whirlflock      | 0.6 g | Boil     | 10 min |
| Water Agent | witamina c      | 2 g   | Bottling | ---    |