

## Początek sezonu

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **40**
- SRM **6**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **32.4 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **19.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **32.4 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount        | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt  | 5 kg (78.1%)  | 85 %  | 6   |
| Grain | Weyermann pszeniczny jasny | 0.6 kg (9.4%) | 80 %  | 4   |
| Grain | Carahell                   | 0.4 kg (6.3%) | 77 %  | 25  |
| Grain | Weyermann - Carared        | 0.4 kg (6.3%) | 75 %  | 45  |

### Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | Magnum     | 30 g   | 60 min | 13.5 %     |
| Boil                | Cascade PL | 20 g   | 25 min | 4.8 %      |
| Boil                | Sybilla    | 45 g   | 5 min  | 3 %        |
| Aroma (end of boil) | sybilla    | 45 g   | 1 min  | 3 %        |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.9 g | Fermentis  |

### Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | Mech Irlandzki | 5 g    | Boil    | 15 min |

## Notes

- Cascade szyszka wysuszone. Z własnej uprawy (jednoroczny krzak)  
Sybilla szyszka świeża z własnej uprawy. Ogólnie Sybilli jest 6 razy więcej ok 2x 280g  
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