

## wszystko od początku

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- Gravity **11.9 BLG**
- ABV ---
- IBU **44**
- SRM **7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **29.5 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **55 C**, Time **5 min**
- Temp **70 C**, Time **55 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **15.6 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **55 min** at **70C**
- Keep mash **1 min** at **76C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **29.5 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński         | 3 kg (67.4%)   | 80 %  | 4   |
| Grain | Strzegom Monachijski typ II | 1 kg (22.5%)   | 79 %  | 22  |
| Grain | Monachijski                 | 0.15 kg (3.4%) | 80 %  | 16  |
| Grain | Strzegom Karmel 30          | 0.3 kg (6.7%)  | 75 %  | 30  |

### Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Marynka           | 40 g   | 60 min | 9.5 %      |
| Boil    | Lublin (Lubelski) | 40 g   | 5 min  | 4 %        |
| Boil    | Sybilla           | 30 g   | 0 min  | 3.5 %      |

### Yeasts

| Name         | Type | Form  | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| safale us 05 | Ale  | Slant | 200 ml | fermentis  |