

## 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