

## Podporucznik (24)

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- Gravity **15.4 BLG**
- ABV ---
- IBU **67**
- SRM **5.2**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **29.4 liter(s)**

### Steps

- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **22.4 liter(s)** of strike water to **58.2C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **31.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (42.9%)	80 %	4
Grain	Strzegom Pale Ale	3 kg (42.9%)	79 %	6
Grain	Strzegom Monachijski typ I	0.5 kg (7.1%)	79 %	16
Grain	Pszeniczny	0.5 kg (7.1%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	10 %
Boil	Mosaic	30 g	10 min	10 %
Dry Hop	Mosaic	60 g	6 day(s)	12 %
Boil	Perle	30 g	30 min	7 %