ŁOPATA

- Gravity **13.5 BLG**
- ABV **---**
- IBU **45**
- SRM **6.2**
- 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 **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg *(92.6%)*	79 %	6
Grain	Carared	0.2 kg *(3.7%)*	75 %	39
Grain	Briess - 2 Row Carapils Malt	0.2 kg *(3.7%)*	75 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	9.5 %
Boil	Marynka	10 g	20 min	9.5 %
Aroma (end of boil)	Lublin (Lubelski)	20 g	5 min	3.6 %
Whirlpool	Lublin (Lubelski)	30 g	0 min	3.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M07 British Ale	Ale	Slant	200 ml	Mangrove Jack's

Extras

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	15 g	Boil	15 min