

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

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