

Mgiełka

- Gravity **13.3 BLG**
- ABV ---
- IBU **61**
- SRM **3.6**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **40 min**
- Evaporation rate **12 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **92 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**
- Temp **54 C**, Time **15 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **15 min** at **54C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|---------------|-------|-----|
| Grain | Viking Pilsner malt | 3 kg (56.6%) | 82 % | 3 |
| Grain | Słód pszeniczny Bestmalz | 0.5 kg (9.4%) | 82 % | 5 |
| Grain | Żytni | 0.3 kg (5.7%) | 85 % | 8 |
| Grain | Płatki owsiane | 0.5 kg (9.4%) | 60 % | 3 |
| Grain | Słód owsiany Viking Malt | 0.5 kg (9.4%) | 6 % | --- |
| Grain | Viking Golden ale | 0.5 kg (9.4%) | 80 % | 14 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 20 g | 30 min | 15.5 % |
| Boil | Galaxy | 40 g | 15 min | 14.5 % |
| Boil | Galaxy | 40 g | 5 min | 14.5 % |
| Dry Hop | Galaxy | 20 g | 3 day(s) | 14.5 % |
| Dry Hop | Eclipse - AUS | 25 g | 3 day(s) | 17.5 % |
| Dry Hop | Summit | 25 g | 3 day(s) | 15.5 % |

| | | | | |
|---------|---------------|------|----------|--------|
| Dry Hop | Chinook PL | 50 g | 2 day(s) | 10 % |
| Dry Hop | Eclipse - AUS | 25 g | 2 day(s) | 17.5 % |
| Dry Hop | Summit | 25 g | 2 day(s) | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------|------|-------|--------|-----------------|
| Mangrove Jack's M66 Hophead | Ale | Slant | 100 ml | Mangrove Jack's |