

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