

ne

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **31**
- SRM **4**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **23.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **19.7 liter(s)**

Steps

- Temp **64 C**, Time **80 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **80 min** at **64C**
- Keep mash **10 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **23.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.94 kg (80.1%)	80 %	5
Grain	Weyermann - Carapils	0.44 kg (8.9%)	78 %	4
Grain	Płatki owsiane	0.27 kg (5.5%)	85 %	3
Grain	Pszeniczny	0.27 kg (5.5%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	26.25 g	30 min	4.5 %
Aroma (end of boil)	Citra	25 g	10 min	12 %
Citra 45 g + Mosaic 45 g jako zamienniki dla 90-100 g Falconers Flight				
Aroma (end of boil)	Mosaic	25 g	10 min	10 %
Dry Hop	Cascade	50 g	8 day(s)	6 %
Dry Hop	Vic Secret	50 g	8 day(s)	16.3 %
Dry Hop	Lemon Drop	50 g	8 day(s)	4.6 %
Dry Hop	Equinox	25 g	8 day(s)	13.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale US-05	Ale	Slant	437.5 ml	Fermentis
starter 150ml w celu rehydratacji drozdzy				
FM55 Zielone Wzgórze	Ale	Slant	437.5 ml	Fermentum Mobile
1000ml starter z FM55				

Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	8.75 g	Boil	15 min
Water Agent	gips piwowarski	3.5 g	Mash	---