

Wungiel

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **61**
- SRM **35.6**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **10 %**
- Size with trub loss **18.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.75 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **26.6 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **67.6C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **6.6 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (71.4%)	80 %	5
Grain	Weyermann - Carapils	1 kg (17.9%)	78 %	4
Grain	Carafa III	0.6 kg (10.7%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	8 %
Whirlpool	Citra	15 g	30 min	12 %
Whirlpool	Mosaic	15 g	30 min	10 %
Whirlpool	Cascade	15 g	30 min	6 %
Dry Hop	Citra	35 g	6 day(s)	12 %
Dry Hop	Mosaic	35 g	6 day(s)	10 %
Dry Hop	Cascade	35 g	6 day(s)	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Slant	500 ml	Fermentis