

## BIAB Ella single hop

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **42**
- SRM **4.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **10.4 liter(s)**
- Trub loss **14 %**
- Size with trub loss **13.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **18.3 liter(s)**

### Steps

- Temp **68 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **14.4 liter(s)** of strike water to **74.5C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **5.7 liter(s)** of **76C** water or to achieve **16.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Płatki owsiane	0.4 kg (10.3%)	60 %	3
Grain	Viking Pale Ale malt	3 kg (76.9%)	80 %	5
Grain	Viking Cara Body Malt	0.5 kg (12.8%)	80 %	8

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Ella (AUS)	20 g	30 min	14.6 %
Whirlpool	Ella (AUS)	30 g	5 min	14.6 %
Dry Hop	Ella (AUS)	50 g	3 day(s)	14.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - LalBrew American East Coast - New England	Ale	Slant	150 ml	Lallemand