

# phi...pa

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **74**
- SRM **3.9**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **17.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.2 liter(s)**

## Steps

- Temp **66 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **12.6 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **15 min** at **66C**
- Keep mash **45 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **17.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2.6 kg (72.2%)	82 %	4
Grain	Pszeniczny	0.7 kg (19.4%)	85 %	4
Grain	Oats, Flaked	0.3 kg (8.3%)	80 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	60 min	11 %
Whirlpool	Zula	50 g	20 min	13.3 %
Whirlpool	Izabella	50 g	20 min	6.8 %
Dry Hop	Izabella	50 g	3 day(s)	6 %
Dry Hop	Książęcy	100 g	3 day(s)	10.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - LalBrew Verdant IPA	Ale	Slant	200 ml	Lallemand