

# Apollo IPA

- Gravity **13.5 BLG**
- ABV ---
- IBU **63**
- SRM **8.9**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **7 %**
- Size with trub loss **24.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **28.9 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **18.1 liter(s)**
- Total mash volume **23.6 liter(s)**

## Steps

- Temp **62 C**, Time **10 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **18.1 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **28.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Malteurope Pale Ale	5 kg (90.9%)	79 %	6
Grain	Pszeniczny	0.2 kg (3.6%)	85 %	4
Grain	Special B Malt	0.1 kg (1.8%)	65.2 %	315
Grain	Carahell	0.1 kg (1.8%)	77 %	26
Grain	Carapils	0.1 kg (1.8%)	74 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Apollo	25 g	60 min	18 %
Boil	Apollo	10 g	30 min	18 %
Aroma (end of boil)	Apollo	15 g	5 min	18 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	11 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	15 min