

# POLISH HOPS APA 13 BLG #68

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **24**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **26.6 liter(s)**

## Steps

- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **20.7 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (84.7%)	81 %	4
Grain	Karmelowy Jasny 30EBC	0.5 kg (8.5%)	75 %	30
Grain	Słód owsiany	0.2 kg (3.4%)	61 %	5
Grain	Pszeniczny	0.2 kg (3.4%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	EXP 2/20 PH	30 g	60 min	8.1 %
Whirlpool	EXP 2/20 PH	20 g	0 min	8.1 %
Whirlpool	Amora Preta PH	50 g	0 min	9 %
Dry Hop	EXP 2/20 PH	50 g	4 day(s)	8.1 %
Dry Hop	Amora Preta PH	50 g	4 day(s)	9 %
Dry Hop	EXP 2/20 PH	50 g	4 day(s)	8.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	---