

# Full Aroma Hops

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- Gravity **9.8 BLG**
- ABV ---
- IBU **43**
- SRM **3.8**
- Style **Blonde Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **61 C**, Time **15 min**
- Temp **71 C**, Time **45 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **67.8C**
- Add grains
- Keep mash **15 min** at **61C**
- Keep mash **45 min** at **71C**
- Keep mash **10 min** at **76C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	4 kg (100%)	81 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	13.5 %
Boil	Lublin (Lubelski)	30 g	30 min	4.5 %
Boil	Lublin (Lubelski)	15 g	5 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale