

## Hop aroma

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- Gravity **9.5 BLG**
- ABV **3.7 %**
- IBU **52**
- SRM **2.8**

### Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **49.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **61 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **26.4 liter(s)**
- Total mash volume **34.4 liter(s)**

### Steps

- Temp **40 C**, Time **0 min**
- Temp **61 C**, Time **10 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **26.4 liter(s)** of strike water to **43C**
- Add grains
- Keep mash **0 min** at **40C**
- Keep mash **10 min** at **61C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **42.6 liter(s)** of **76C** water or to achieve **61 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	8 kg (100%)	81 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	56 g	60 min	12 %
Boil	East Kent Goldings	72 g	45 min	4.7 %
Aroma (end of boil)	Lublin (Lubelski)	75 g	1 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	22 g	Safale