

## 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     |