

## Full Aroma Hops

- 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     |