

## Full Aroma Hops (Carlberg)

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **33**
- SRM **3.4**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **28.8 liter(s)**

### Steps

- Temp **40 C**, Time **1 min**
- Temp **61 C**, Time **10 min**
- Temp **71 C**, Time **45 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **22.8 liter(s)** of strike water to **42.6C**
- Add grains
- Keep mash **1 min** at **40C**
- Keep mash **10 min** at **61C**
- Keep mash **45 min** at **71C**
- Keep mash **10 min** at **76C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilznieński	6 kg (100%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Lublin (Lubelski)	30 g	25 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	15 g	5 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew US-04	Ale	Dry	11.5 g	---