

## full aroma hops 20l

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **44**
- SRM **4.1**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **80 min**
- Evaporation rate **5 %/h**
- Boil size **23.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **62 C**, Time **10 min**
- Temp **72 C**, Time **50 min**

### Mash step by step

- Heat up **14.7 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **50 min** at **72C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.6 kg (85.7%)	80 %	4
Grain	Strzegom Monachijski typ I	0.6 kg (14.3%)	79 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	8.5 %
Boil	Lublin (Lubelski)	10 g	20 min	4 %
Boil	Lublin (Lubelski)	15 g	1 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis