

## 8# Black Smoke

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **27**
- SRM **35.1**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.4 liter(s)**
- Total mash volume **23.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **18.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2 kg (38.1%)	85 %	7
Grain	Strzegom Monachijski typ II	1 kg (19%)	79 %	22
Grain	Smoked Malt - grusza viking malt	1 kg (19%)	80 %	18
Grain	Weyermann - Dark Wheat Malt	0.5 kg (9.5%)	85 %	14
Grain	Weyermann - Carafa II specjal	0.25 kg (4.8%)	70 %	1100
Grain	Strzegom Barwiący	0.25 kg (4.8%)	68 %	1300
Grain	Caraaroma	0.25 kg (4.8%)	78 %	400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	14.6 %
Boil	Columbus/Tomahawk/Zeus	15 g	5 min	14.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Safale S-04	Ale	Dry	11.5 g	Safale
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