

## Bitter V.1

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- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **32**
- SRM **9.7**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **12.7 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**

### Mash step by step

- Heat up **10.2 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	0.5 kg (19.7%)	79 %	6
Grain	Karmelowy Jasny 30EBC	0.3 kg (11.8%)	75 %	30
Grain	Strzegom Monachijski typ II	0.2 kg (7.9%)	79 %	22
Grain	Strzegom Pilzneński	1.5 kg (59.1%)	80 %	4
Grain	Carafa III	0.04 kg (1.6%)	70 %	1034

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Oktawia	15 g	60 min	7.8 %
Boil	Oktawia	15 g	10 min	7.8 %
Aroma (end of boil)	Oktawia	20 g	0 min	7.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	7 g	Safale