

## Special Bitter

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **36**
- SRM **8.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **32 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **41.1 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **26.3 liter(s)**
- Total mash volume **33.8 liter(s)**

### Steps

- Temp **67 C**, Time **70 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **26.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **1 min** at **76C**
- Sparge using **22.3 liter(s)** of **76C** water or to achieve **41.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5.5 kg (73.3%)	81 %	4
Grain	Strzegom Karmel 150	0.5 kg (6.7%)	75 %	150
Grain	Strzegom Monachijski typ I	0.5 kg (6.7%)	79 %	16
Grain	Strzegom Monachijski typ II	1 kg (13.3%)	79 %	22

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Blanc	35 g	60 min	11 %
Boil	English Golding	30 g	30 min	4.8 %
Boil	English Golding	20 g	10 min	4.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Liquid	25 ml	Fermentum Mobile
Starter				