

## [M] Pils

- Gravity **11.7 BLG**
- ABV ---
- IBU **35**
- SRM **4**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **44.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **30 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **5 min** at **78C**
- Sparge using **29.3 liter(s)** of **76C** water or to achieve **44.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	7.5 kg (100%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	60 min	10 %
Aroma (end of boil)	lunga	20 g	15 min	11 %
Aroma (end of boil)	Marynka	20 g	15 min	10 %
Aroma (end of boil)	Sybilla	20 g	15 min	3.5 %
Aroma (end of boil)	lunga	30 g	5 min	11 %
Aroma (end of boil)	Marynka	30 g	5 min	10 %
Aroma (end of boil)	Sybilla	30 g	5 min	3.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	200 ml	Fermentum Mobile