

# Włochy

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **29**
- SRM **3.3**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **54.2 liter(s)**

## Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **29.7 liter(s)**
- Total mash volume **38.7 liter(s)**

## Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **29.7 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **33.5 liter(s)** of **76C** water or to achieve **54.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	8.5 kg (94.4%)	81 %	4
Grain	Cara-Pils/Dextrine	0.5 kg (5.6%)	72 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Agnus	10 g	60 min	14 %
Boil	Agnus	30 g	30 min	14 %
Boil	Saaz (Czech Republic)	30 g	30 min	3 %
Aroma (end of boil)	Hallertau Mittelfruh	50 g	0 min	3 %
Dry Hop	Hallertau Mittelfruh	50 g	3 day(s)	3 %
Dry Hop	Agnus	100 g	3 day(s)	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	22 g	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	whirfloc	1.25 g	Boil	15 min