

# Przepis 1

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **19**
- SRM **4.7**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **9 %**
- Size with trub loss **24 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **27.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

## Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3.8 kg (79.2%)	82 %	4
Grain	Viking Munich Malt	1 kg (20.8%)	78 %	22

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	10 g	60 min	12 %
Aroma (end of boil)	Oktawia	10 g	15 min	4 %
Whirlpool	Sybilla	15 g	0 min	5.7 %
Whirlpool	Oktawia	15 g	0 min	4 %
Aroma (end of boil)	Perle	15 g	15 min	7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-5	Lager	Dry	11.5 g	---