

# śłodowy raj

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **11**
- SRM **6**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **39.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **25.6 liter(s)** of **76C** water or to achieve **39.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (71.4%)	80 %	4
Grain	Viking melanoidynowy	1 kg (14.3%)	75 %	40
Grain	Strzegom Monachijski typ I	1 kg (14.3%)	79 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Kazbek	10 g	60 min	4.6 %
Boil	Saaz (Czech Republic)	10 g	60 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	10 g	15 min	4.5 %
Aroma (end of boil)	Kazbek	10 g	15 min	4.6 %
Aroma (end of boil)	Kazbek	10 g	5 min	4.6 %
Aroma (end of boil)	Saaz (Czech Republic)	10 g	5 min	4.5 %
Dry Hop	Saaz (Czech Republic)	20 g	7 day(s)	4.5 %
Dry Hop	Kazbek	20 g	7 day(s)	4.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - German Ale	Ale	Liquid	125 ml	Wyeast Labs