

# koźlak południowy

- Gravity **17.5 BLG**
- ABV **7.5 %**
- IBU **28**
- SRM **16.9**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

## Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **24 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **50 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	3 kg (37.5%)	80 %	5
Grain	Strzegom Monachijski typ I	3 kg (37.5%)	79 %	16
Grain	Karmelowy Czerwony	0.7 kg (8.8%)	75 %	59
Grain	Strzegom Czekoladowy jasny	0.3 kg (3.8%)	68 %	400
Grain	Red Activ	0.5 kg (6.3%)	79 %	35
Grain	karmelowy crystal	0.5 kg (6.3%)	79 %	50

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	8 %
Boil	Perle	30 g	20 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	700 ml	---