

# Świerkowe PK

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **22**
- SRM **5.5**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **19.9 liter(s)**

## Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **15.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **8.6 liter(s)** of **76C** water or to achieve **19.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Best	3.3 kg (73.3%)	80 %	6
Grain	Wiener Malz Best	0.7 kg (15.6%)	80 %	8
Grain	Weizenmalz Best	0.4 kg (8.9%)	82 %	4
Grain	Carahell Best	0.1 kg (2.2%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	30 min	13 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	Młode pędy świerku	80 g	Boil	30 min
Flavor	Młode pędy świerku	40 g	Boil	0 min

Water Agent	CaCl2 33%	1 g	Mash	---
Water Agent	Gips Piwowarski	3 g	Mash	---
Water Agent	Kwas mlekowy	3 g	Mash	---