

# chmielasek

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **24**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **30 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.5 kg (81.8%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (18.2%)	79 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	8.7 %
Boil	Perle	20 g	10 min	7.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale