

# apa 1 działka

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **14**
- SRM **6.5**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **23.2 liter(s)**

## Steps

- Temp **68 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **50 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (97.1%)	81 %	4
Grain	Strzegom Karmel 300	0.15 kg (2.9%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	10 g	60 min	10 %
Boil	Saaz (Czech Republic)	20 g	15 min	4.5 %
Whirlpool	Saaz (Czech Republic)	20 g	0 min	4.5 %

## Yeasts

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