

## #4 APA

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **44**
- SRM **7.7**
- 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 **72 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **16.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (44.6%)	80 %	4
Grain	Strzegom Pale Ale	2.5 kg (44.6%)	79 %	6
Grain	Strzegom Pszeniczny	0.3 kg (5.4%)	81 %	6
Grain	Strzegom Karmel 150	0.3 kg (5.4%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	10 g	60 min	13.2 %
Boil	Amarillo	15 g	20 min	7.5 %
Boil	Cascade	15 g	20 min	7.1 %
Boil	Amarillo	15 g	7 min	7.5 %
Boil	Cascade	15 g	7 min	7.1 %
Whirlpool	Amarillo	20 g	20 min	7.5 %
Whirlpool	Cascade	20 g	20 min	7.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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FM52 Amerykański Sen	Ale	Liquid	125 ml	Fermentum Mobile
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### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	10 min

### Notes

- 13Blg i 24L do fermentacji  
2 tygodnie burzliwej i tydzień cichej - 2Blg  
*Jan 2, 2018, 11:24 PM*