

## APA#5

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **43**
- SRM **3.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **11 %/h**
- Boil size **54.2 liter(s)**

### Mash information

- Mash efficiency **84 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **31 liter(s)**
- Total mash volume **40.4 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **31 liter(s)** of strike water to **74.1C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **77C**
- Sparge using **32.6 liter(s)** of **76C** water or to achieve **54.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzniejszy	9 kg (95.7%)	80 %	4
Grain	Bestmalz Carmel Pils	0.2 kg (2.1%)	75 %	5
Grain	Carahell	0.2 kg (2.1%)	77 %	26

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	60 min	12.6 %
Boil	Citra	30 g	25 min	13 %
Boil	Amarillo	30 g	25 min	8.7 %
Aroma (end of boil)	Citra	100 g	0 min	13 %
Aroma (end of boil)	Centennial	50 g	0 min	10.1 %
Dry Hop	Cascade	150 g	3 day(s)	6.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	22 g	fermentis