

## Apa vol.2

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **39**
- SRM **4.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **49.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.14 liter(s) / kg**
- Mash size **33 liter(s)**
- Total mash volume **43.5 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **33 liter(s)** of strike water to **74.5C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **26.6 liter(s)** of **76C** water or to achieve **49.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	9 kg (85.7%)	81 %	4
Grain	Strzegom Monachijski typ I	1 kg (9.5%)	79 %	16
Grain	Strzegom Karmel 30	0.5 kg (4.8%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	50 g	60 min	10.5 %
Aroma (end of boil)	Cascade	50 g	15 min	6 %
Aroma (end of boil)	Cascade	50 g	5 min	6 %
Dry Hop	Cascade	50 g	5 day(s)	6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	20.95 g	Safale
Safale S-04	Ale	Dry	20.95 g	Safale