

# Electric Pale Ale

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **39**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **29 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.9 liter(s)**
- Boil time **80 min**
- Evaporation rate **12 %/h**
- Boil size **41.1 liter(s)**

## Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **44 liter(s)**

## Steps

- Temp **64 C**, Time **120 min**
- Temp **78 C**, Time **15 min**
- Temp **50 C**, Time **10 min**
- Temp **66 C**, Time **20 min**

## Mash step by step

- Heat up **36 liter(s)** of strike water to **53.3C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **120 min** at **64C**
- Keep mash **20 min** at **66C**
- Keep mash **15 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **41.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.3 kg (41.3%)	79 %	6
Grain	Strzegom Pilzneński	3.18 kg (39.8%)	80 %	4
Grain	Strzegom Monachijski typ I	1.02 kg (12.8%)	79 %	16
Grain	Strzegom Pszeniczny	0.5 kg (6.3%)	81 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Columbus/Tomahawk/Zeus	6 g	80 min	15.5 %
Boil	Centennial	20 g	15 min	10.5 %
Boil	Amarillo	20 g	15 min	9.5 %
Boil	Simcoe	10 g	15 min	13.2 %
Boil	Centennial	35 g	5 min	10.5 %
Boil	Amarillo	35 g	5 min	9.5 %
Boil	Simcoe	20 g	5 min	13.2 %
Aroma (end of boil)	Centennial	45 g	0 min	10.5 %

Aroma (end of boil)	Amarillo	45 g	0 min	9.5 %
Aroma (end of boil)	Simcoe	20 g	0 min	13.2 %
Dry Hop	Citra	50 g	5 day(s)	12 %
Dry Hop	Simcoe	50 g	5 day(s)	11.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	22 g	Fermentis