

## LEM | American Pale Ale (by Piwny Kraft)

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **37**
- SRM **8.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **0 %**
- Size with trub loss **20 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22 liter(s)**

### Mash information

- Mash efficiency **69.5 %**
- Liquor-to-grist ratio **3.34 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22.1 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **17 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (78.4%)	80 %	5
Grain	Strzegom Monachijski typ I	0.8 kg (15.7%)	79 %	16
Grain	Karmelowy Czerwony	0.2 kg (3.9%)	75 %	59
Grain	Strzegom Karmel 300	0.1 kg (2%)	73 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	30 min	15.5 %
Boil	Amarillo	10 g	10 min	9.5 %
Aroma (end of boil)	Amarillo	15 g	0 min	9.5 %
Dry Hop	Amarillo	25 g	7 day(s)	9.5 %

### Notes

- Zacieranie w 17 litrach w 68C - 1h.  
Podniesienie temperatury do 72C - 10 min.  
Podniesienie temperatury do 76C - maschout.

Filtracja i wysładzanie do 22L.

Fermentacja w temp. 17-18C - 7 dni burzliwa + 7 dni cicha  
*May 16, 2019, 9:24 PM*