

# Pliny the Elder

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **91**
- SRM **5.5**
- Style **Imperial IPA**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11.7 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **16.2 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **17.4 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **13.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **77C**
- Sparge using **6.6 liter(s)** of **76C** water or to achieve **16.2 liter(s)** of wort

## Fermentables

| Type  | Name              | Amount         | Yield | EBC |
|-------|-------------------|----------------|-------|-----|
| Grain | Mep@ Pils         | 3.8 kg (92.2%) | 82 %  | 4   |
| Sugar | Cukier            | 0.25 kg (6.1%) | 100 % | --- |
| Grain | Viking Karmel 100 | 0.07 kg (1.7%) | 75 %  | 100 |

## Hops

| Use for   | Name                   | Amount | Time     | Alpha acid |
|-----------|------------------------|--------|----------|------------|
| Boil      | Chinook                | 15 g   | 60 min   | 13.1 %     |
| Boil      | Columbus/Tomahawk/Zeus | 5 g    | 60 min   | 15.7 %     |
| Boil      | Amarillo               | 5 g    | 45 min   | 8.4 %      |
| Boil      | Simcoe                 | 15 g   | 30 min   | 14.5 %     |
| Whirlpool | Cascade                | 10 g   | 15 min   | 8.3 %      |
| Whirlpool | Centennial             | 10 g   | 15 min   | 10.5 %     |
| Whirlpool | Amarillo               | 10 g   | 15 min   | 8.4 %      |
| Whirlpool | Simcoe                 | 10 g   | 15 min   | 14.5 %     |
| Dry Hop   | Columbus/Tomahawk/Zeus | 45 g   | 4 day(s) | 15.7 %     |
| Dry Hop   | Centennial             | 25 g   | 4 day(s) | 10.5 %     |
| Dry Hop   | Simcoe                 | 25 g   | 4 day(s) | 14.5 %     |

|         |                        |      |          |        |
|---------|------------------------|------|----------|--------|
| Dry Hop | Columbus/Tomahawk/Zeus | 50 g | 2 day(s) | 15.7 % |
| Dry Hop | Centennial             | 25 g | 2 day(s) | 10.5 % |
| Dry Hop | Simcoe                 | 25 g | 2 day(s) | 14.5 % |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 90 ml  | Fermentum Mobile |

## Extras

| Type        | Name           | Amount | Use for | Time   |
|-------------|----------------|--------|---------|--------|
| Water Agent | gips           | 6.8 g  | Mash    | 90 min |
| Water Agent | sól epsom      | 3.3 g  | Mash    | 90 min |
| Water Agent | chlorek wapnia | 0.2 g  | Mash    | 90 min |

## Notes

- 2MCBH0C 10,1 l kranówka + 10 l RO  
Ca - 118,3  
Mg - 24,3  
Na - 55  
Cl - 51,7  
SO4 - 269,6  
alk.rez - 2,3  
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