

# inop apa

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **36**
- SRM **5.2**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.2 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

## Fermentables

| Type  | Name              | Amount     | Yield | EBC |
|-------|-------------------|------------|-------|-----|
| Grain | Strzegom Pale Ale | 4 kg (80%) | 79 %  | 6   |
| Grain | Monachijski       | 1 kg (20%) | 80 %  | 16  |

## Hops

| Use for | Name     | Amount | Time     | Alpha acid |
|---------|----------|--------|----------|------------|
| Boil    | Amarillo | 25 g   | 50 min   | 9.5 %      |
| Boil    | Citra    | 25 g   | 10 min   | 12 %       |
| Dry Hop | Citra    | 20 g   | 5 day(s) | 12 %       |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 10 g   | Fermentis  |