

# ZACIERAPA\_2\_UWARZONO

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **46**
- SRM **5.1**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **32.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **30 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **30 min** at **76C**
- Sparge using **20.3 liter(s)** of **76C** water or to achieve **32.3 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount        | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Briess - Pale Ale Malt      | 5 kg (83.3%)  | 80 %  | 7   |
| Grain | Pszeniczny                  | 0.5 kg (8.3%) | 85 %  | 4   |
| Grain | Strzegom Monachijski typ II | 0.5 kg (8.3%) | 79 %  | 22  |

## Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Summit     | 8 g    | 60 min | 18 %       |
| Boil    | Summit     | 10 g   | 30 min | 18 %       |
| Boil    | Centennial | 10 g   | 30 min | 8.5 %      |
| Boil    | summit     | 10 g   | 15 min | 18 %       |
| Boil    | Centennial | 10 g   | 15 min | 8.5 %      |
| Boil    | Summit     | 10 g   | 5 min  | 18 %       |
| Boil    | Centennial | 10 g   | 5 min  | 8.5 %      |
| Boil    | Summit     | 15 g   | 0 min  | 18 %       |
| Boil    | Centennial | 15 g   | 0 min  | 8.5 %      |
| Boil    | Cascade_pl | 15 g   | 0 min  | 6 %        |

|                     |            |      |          |       |
|---------------------|------------|------|----------|-------|
| Aroma (end of boil) | summit     | 10 g | -3 min   | 18 %  |
| Aroma (end of boil) | Cascade_pl | 10 g | -3 min   | 4.5 % |
| Aroma (end of boil) | Centennial | 10 g | -3 min   | 8.5 % |
| Dry Hop             | Centennial | 40 g | 4 day(s) | 8.5 % |
| Dry Hop             | Summit     | 35 g | 4 day(s) | 18 %  |
| Dry Hop             | Cascade_pl | 25 g | 4 day(s) | 4.5 % |

## Yeasts

| Name  | Type | Form  | Amount | Laboratory |
|-------|------|-------|--------|------------|
| us-05 | Ale  | Slant | 100 ml | ROBOT      |